THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK,

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

"The Productions of the Earth will always be in proportion to the culture bestowed upon it."

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For the Farmers' Cabinet.

Flax, etc.

"CHARITY SHOULD BEGIN AT HOME."

THE cultivation of flax, which formerly was deemed an object of importance, has for a long series of years been almost entirely abandoned throughout our country, although it is understood large quantities of the article in a dressed state, and immense quantities of the seed, and the oil expressed from it, are annually imported from foreign countries at a great cost to the nation.

The soil and climate of much of our country are peculiarly adapted to the production of this plant, particularly in the west, where the soil is rich and grain is low, and where it could be cultivated to the greatest advantage. Modern improvements have been made in machinery, and in preparing this article for manufacture, and it is now ascertained, beyond doubt, that it can be spun and wove with nearly or quite the same facility as cotton. The improved preparing and bleaching processes give it almost the fineness and softness of silk; and the impression is, that nothing is wanting to introduce the manufacture on a large scale, but the fostering hand of a wise administration of government to counteract the effect of the six cents a day labour of Europe until it fairly takes root and becomes established. Plain linen goods of all descriptions are imported duty free, though they materially interfere with the consumption of our domestic cotton fabrics, and during the year 1839 the invoice price of the quantity imported into the United States, was $7,750,336; an impost duty of 25 per cent., it is believed, would have reduced this amount to one-third, and have increased the use of cotton goods of our own production in a corresponding degree.

The seed of flax possesses properties which render it indispensable for making oil for paints; and as food for some descriptions of animals in limited quantities, and under a proper and judicious administration of it there is no article superior to it. Yet, strange as it may appear, flaxseed is admitted to importation free of duty; and tens of thousands of bushels of it are every year introduced into these United States from Calcutta, just round exactly on the other side of the globe! The poor East Indians who cultivate it for, and send it to us in such immense quantities, must suppose we live in a miserable country indeed, when we apply to them for flaxseed. When I was first informed of these importations I had doubts of their truth, but on inquiry of those who express the oil for paints on a large scale, it was verified far beyond expectation. One manufacturer of the largest class informed me, that every bushel he had used for the year previous, came from the East Indies.

The seed thus imported, and the expressed oil, which is introduced in large quantities from Holland and Great Britain, cost us considerably upwards of a million of dollars annually; the oil alone cost, in 1839, 711,389 dollars.

It requires a rich country, indeed, to afford such vast importations from abroad, free of duty, of articles which our soil and climate so well favour the production of, in almost any quantities; but we are such lovers of free trade, that we admit free foreign competition with our agriculturists, although nearly every article we send abroad pays a heavy duty, sometimes more than the original cost, before it enters into foreign consumption.

I like free trade in its widest sense; but then it must be free *every where*, in Europe as well as in America, to suit my taste, and come up to what we agricultural republicans consider reciprocal justice.

Many of our planters and farmers in the South and West raise large quantities of tobacco, and it is deemed a valuable source of revenue to them; yet the duties paid on this article on its being shipped to any part of Europe is several times the first cost of it in this country. Any one would suppose that this favoured country could supply *itself* with tobacco in all its forms of manufacture; yet we find, by referring to the report of the Secretary of the Treasury, that there was imported in 1839, segars, the cost of which was the enormous sum of $1,026,740!!!

Now, putting the cost of our plain linens,

our flaxseed and flaxseed oil, and segars together, and we have an aggregate of ten millions of dollars, gone out of the country to enrich foreign nations and impoverish our own, all in the short space of one year. What think ye of this farmers; is this good management, good economy? say yea or nay at once, or ever after keep silence. A. B.

For the Farmers' Cabinet.

Water-proof Dubbing for Leather.

KEEP YOUR FEET DRY AND HEAD COOL.

To render leather water-proof, and at the same time to preserve its elasticity, is a matter of great importance, as it increases its durability, and protects those who apply it to shoes or boots from the mischievous effects arising from damp or wet feet. The following receipt followed out carefully, it is believed, will effect this object.

Take a pint of linseed oil, two ounces of beeswax, two ounces of spirits of turpentine, and half an ounce of Burgundy pitch, and slowly melt them together, continuing to stir them so as thoroughly to incorporate them, being careful not to set the mass on fire, as the ingredients are all combustible. When this compound cools, it will be found to be about as elastic as leather ought to be. If it were harder, it would cause the leather to crack or break when bent; and if it were softer, water would enter and wash it out. To apply it, re-melt it, warm the shoes or boots, and put it on with a small brush, or a sponge, or piece of cloth tied on the end of a stick; continue to warm it in till the leather is well saturated with it, and particularly the bottoms of the soles and heels. It should always be applied when the boots or shoes are new, and then lay them by to season for some time before wearing. Leather thus treated will be found impervious to water, and will wear twice as long as that to which it has not been applied. The writer has used this article for many years, and can testify to the great benefits derived from it; and he has no doubt but his shoemaker's bill has been reduced to one-half by the use of this composition; and what has been saved in doctors' bills he is unable to estimate.

Common grease applied to leather tends to rot it, and it is soon washed out in wet weather. O.

N. B. After shoes have been worn a short time, the leather will take blacking and shine as well as if the composition had not been applied to it.

To preserve seeds in long voyages, mix them with powdered sugar and roll them tight in paper.

For the Farmers' Cabinet.

Anti-Friction.

HE WHO MAKES HARD THINGS GO EASY, DESERVES PRAISE.

If horses could speak, no doubt they would often complain of the excessive friction of cart and wagon wheels.

It should be the duty, as it is unquestionably the interest of every farmer in the country, to see to the state of his wheels at frequent intervals, and lessen the friction of them to the lowest possible degree. The horse is an interesting and useful animal, and has but a dogged life of it under the most favourable circumstances, and therefore he ought to have his interest and comfort duly considered and attended to. Those who oppress beasts unnecessarily, always add to their own burdens by increasing their expenses; for all domestic animals pay well for kindness and care. A horse will be more useful, and last much longer under kind and Christian treatment, than when he is subjected to unnecessary hardship and extreme drudgery. A horse always draws with the greatest effect when the line of draught is inclined upwards, so as to make an angle of about 15 degrees with the horizon; for at this inclination the line of traction is set at right angles to the shoulder, all parts of which are then equally pressed. When part of the weight presses on the back of the horse, he will draw a load which else he would be incompetent to move; hence, a horse can accomplish more in a cart properly loaded, than he could otherwise. The question, in regard to the material most proper to be applied to wheel-carriages to diminish friction, is one of great importance, and every well-wisher to the interests of farmers ought to lend some aid in solving it. All the varieties of grease, tar, and their combinations have been resorted to; and there are other substances which have of latter years been adopted to lessen the friction of machinery; such as black-lead and soap-stone pulverized, and mixed with small quantities of fat of some kind. Yet I have seen no results of comparative experiments published to instruct and guide the public. Should any of the readers of the Cabinet possess practical knowledge on this useful and interesting subject, they would much oblige some of your readers by making it public through your columns. We have many *anti's* in our widely extended country, but we want one more, in the form of an *anti-friction composition*, for application to cart and wagon-wheels, to make them revolve with less labour to our horses; and he who will discover and make it known through the Cabinet, will deserve well of the community at large.

Z.

For the Farmers' Cabinet.

English Agricultural Meetings.

As the pleasant season for tillage has again come round, we believe that we cannot serve the interests of our numerous friends more effectually than by copying from our files of late English papers, a few notices relating to some of the numerous Agricultural meetings, chiefly with a view to impress upon them a greater degree of interest concerning that most important of all operations, PLOUGHING, which, it must be confessed, does not receive from us that attention which its high importance demands. Perhaps no part of our labour is attended to with so little care as that of ploughing; while in Europe, the direct reverse is the fact, every encouragement being given to a business which requires the best skill of the husbandman, for upon *that*, much of the success of all his other operations depends.

The first we notice is, "The Anniversary of the Royal Buckinghamshire Agricultural Association." The business of the day commenced with a grand ploughing-match, when £68, besides articles of wearing apparel, hats, &c., were distributed amongst the competitors, one of whom received *a new plough* as a premium. One of the speakers who addressed the meeting, adverted at some length to the necessity of making some improvements in the science and economy of agriculture, and amongst others, that of substituting *the plough with two horses for that of four or six.* He proposed to give, next year, a premium of £5 to the owner of the horses of the successful *two-horse* plough, anticipating that the success attending their use would induce the Bucks farmers to dispense with the needless number of horses (six in a plough) which they at present employ.

2. Bradwell Grove. It is the custom in this part of the country, when a person enters upon a farm, for the neighbours around to send their teams and assist him to sow his first wheat crop. Mr. Gloon having entered upon Down's farm, the adjoining farmers met and ploughed a 24 acre field in the most perfect manner in four hours, taking the opportunity to form the meeting into a *ploughing-match*, as a stimulus for the different ploughmen, when a subscription, upon the spot, enabled them to offer three prizes, which were most ably contested. The day was remarkably fine, and the view was most gratifying; and it is intended to form upon this an anniversary meeting, for the encouragement of the art of ploughing.

3. Surrey Agricultural Association commenced with a ploughing-match, which was the leading attraction of the day. There were fifty-three competitors; and all the nobility of the country, a great proportion being ladies, were present, who, with the large company of farmers and their men, felt the greatest interest in the result of the match while going forward. The arrangements of the field were admirably adjusted, and £59 were distributed to the different labourers and servants upon the farm—male and female—besides premiums to the ploughmen.

4. South Buckingham Agricultural Exhibition. The business commenced with a ploughing-match—60 ploughs in the field: the first prize, five guineas, was given by *Queen Victoria.* The second prize was a match between South Bucks and the South-West Middlesex Association, and was won by the latter. Several other competitors, with three and two-horse ploughs, attracted vast numbers of spectators; and the Chairman, Mr. Harcourt, M. P., remarked, as a proof of the progress of the Association, that when first established, in 1833, they were able to reward but 22 persons with £64; this year the number was 122, with £160.

5. Hertfordshire Agricultural Society commenced with a ploughing-match, in a field of forty acres. The premiums awarded were: Class 1st. A medal for farmers' sons under 23 years of age, who had never been to service, and whose fathers occupy not less than two hundred acres of land, awarded to the son of Mr. Nightingale. Class 2. Five two-horse ploughs started, four premiums awarded. Class 3. Thirty ploughs started, seven premiums awarded—and in addition a silver medal to C. Fry, the maker of his own plough.

6. Stamford Agricultural Society. A beautiful wheat-plough, surmounted with a wheat-sheaf and surrounded by a semi-circle of sickles, the blades of which shone brilliantly when illuminated by the gas, occupied the centre of the dinner-table. On giving the health of the judges of stock, the Chairman remarked, although the duties which these gentlemen had to perform were arduous and unpleasant, yet he had not heard one word of dissatisfaction expressed at their decision.

7. Weatherly Agricultural Association commenced with a ploughing-match, which was numerously attended and well contested. Two classes of premiums were awarded, one to men, the other to youths under eighteen years of age.

8. Surrey and Sussex Agricultural Exhibition. A ploughing-match on a very grand scale opened the business of the day; much superb stock being also exhibited.

9. East Suffolk Agricultural Exhibition was extremely well attended. The show of horses and cattle peculiar to that county was fine beyond any former precedent, and brought large prices at sale.

West Firle lean-stock and sheep show was

very fully attended. The animals had greatly improved by means of these anniversary shows, and were indeed most excellent.

10. Bowen and South Lincoln Agricultural shows. On this occasion a very handsome silver cup was awarded to the *son* of a farmer, a premium for the best ploughing. The stock of all kinds was very superior.

11. Warwickshire Tenth Anniversary of Agricultural Society. The show of Herefords and long-horns, for which this exhibition is very famous, was particularly fine, and commanded universal admiration.

12. Abingdon Agricultural Association. The object of the Society being the encouragement of labourers in husbandry, the ploughing-matches were executed in a masterly style, and were proofs of the practical utility of the Institution.

Capital.

There is no mistake more common nor more injurious, than that of supposing that the more land a man holds, the greater must be his profits, for the profit does not arise from the land itself, but from *the manner of using it;* for the best soil may be made unproductive by bad management, while the worst may be rendered profitable by the opposite course; *but without sufficient capital no land can be properly cultivated;* at the same time, there is nothing to which capital can be applied with greater certainty of a fair return for liberal expenditure, when correctly employed, than land. In fact, assuming always that the expenditure be directed with judgment, it will be found that the profit upon the outlay increases in more than a proportionate degree to its amount; thus, supposing twenty-five dollars be the lowest, and fifty the highest sum that can be employed in the common culture of the same acre of land, it is more than probable that if twenty-five dollars return at the rate of ten per cent., the fifty dollars will yield twenty, or any intermediate sum, at the same progressive ratio. And admitting this to be true —and it is presumed no experienced agriculturist will doubt it—it follows, that a capital of 5,000 dollars, expended in the cultivation of 200 acres, will only yield a profit of 500 dollars, while, if applied to no more than 100 acres, it would produce 1,000 dollars; therefore, it is evident that his profit would be increased by diminishing the quantity of his land. Many a man has been ruined by a large farm, who might have acquired a competency with one of half the size. Most farmers are anxious for large occupations, and many are thus betrayed into the error of taking a greater quantity of ground than they have the means of managing to advantage; some, in the delusive hope of acquiring those means by future savings; others, from the vanity of holding more land than their neighbours: hence arises deficiency of stock, imperfect tillage, and scanty crops, with all the consequent train of rent in arrear, wages ill-paid, and debts unsatisfied — distress, duns, and final ruin! While he, who prudently commences, with only such a number of acres as he has the power of cultivating with proper effect, is certain of obtaining the full return from the soil, and not being burdened with more land than he can profitably enjoy, his engagements are within his means; and thus, while enjoying present ease of mind, he lays the surest foundation for future prosperity. It therefore behoves a man to weigh well the charges with his means, and never allow himself to be seduced by any ideal prospect of gain, into the imprudence of entering upon a larger farm than his property will enable him to manage with the spirit necessary to insure success.—*British Husbandry.*

Magnesian Limestone.

It had been long known to farmers in the neighbourhood of Doncaster (England), that lime, made from a certain stone and applied to land, often injured the crops considerably. Mr. Tennant, in making a set of experiments upon this peculiar calcareous substance, found that it contained magnesia, and on mixing some calcined magnesia with soil in which he sowed different seeds, he found that they either died, or vegetated in a very imperfect manner, and the plants were never healthy; and with great justice and ingenuity he referred the bad effects of this peculiar limestone to the magnesian earth it contained. Yet it is advantageously employed in small quantities, seldom more than 25 or 30 bushels per acre. A simple test of magnesia in limestone is the circumstance of its effervescing little when plunged into an acid, and its rendering diluted nitric acid, or aquafortis, milky. Stones of this kind are usually coloured, brown or pale yellow, and are found in several counties of England, and in many parts of Ireland. With regard to the quantity of lime that ought to be applied to different soils, clays are thought generally to require a larger quantity than sand or dry loam; but these must be well drained before the application. It has been applied in almost every quantity, from one hundred to five hundred bushels per acre — but one hundred and sixty to light lands, and eighty or one hundred bushels more to heavy, cohesive soils, may be considered a full dressing. — *General Report of Scotland.*

For the Farmers' Cabinet.

On Pruning Fruit Trees.

Mr. Editor, — This is a subject which merits our deep regard: to the neglect of this necessary operation might be attributed many of the evils which infest our orchards in the shape of canker, blight, and rottenness, proving in the end the destruction of thousands of our finest trees. I have lately made some extracts from a foreign work, which appear to contain much valuable instruction and many new ideas on this very important branch of rural affairs, and by giving them a place in the Cabinet I think you would be serving a valuable cause.

"Some persons prune off all the fibres of the main roots of the trees before planting, supposing that they must perish and become mouldy; but this pruning is, to say the least, entirely useless; but if any large roots are bruised or lacerated, the injured parts must be removed, as they are too large to heal, although they might not wholly decay.

To secure the proper direction of the roots, every tree must be deprived of those which *tap*, leaving those only which extend nearly at right angles with the stem, the object being, to induce the roots to strike in a horizontal direction not more than six or eight inches below the surface of the earth; but the heading down of the trees before planting, with a view to give them figure in the first instance, is often carried too far by those who consider that by cutting them very low, they give strength to the tree: it is requisite, however — should the wish be to form an orchard of half-standard trees, which is strongly recommended in preference to those of very lofty growth — that a certain number of primary branches be found at a short distance from the ground, and they must therefore be procured by pruning. Suppose then, that only one erect shoot, about a yard in length, be produced from the graft; then it will be necessary to cut it back to the length of six inches above its origin, by which means three or four of the eyes remaining will be excited to send forth as many shoots; these might afterwards be shortened at discretion, according to their strength — the weaker to be cut closer than the stronger — and thus a true balance will be given to the members of the tree. Gardeners differ with respect to the proper season of heading down, some insisting that they ought not to undergo the operation until after they have passed over one entire year after the planting; but after trying every method, the best appears to be, if a strong young tree be planted just before the leaves fall or have quite changed colour, it ought not to be pruned during that autumn or winter, but in the following spring; just when the buds begin to swell, it may be cut back with safety and more certainly than at any season of the second year, and for this reason: if the pruning be performed at the time of planting, say October, the wounds remain exposed unhealed, to the fickleness and severity of the winter; but if the tree, at the commencement of the following April, be sufficiently vigorous to *enlarge its buds*, it will be equally so, to effect the developement of three or four of its lowest eyes, and thus to produce as many branches, at a season when the vital fluids of the glandular coat of the bark will produce healthy granulations over the wounded surfaces: but were the shoot or shoots left wholly unpruned, the leading buds alone might advance and leave a great length of wood of two different years' growths to be cut back to the proper distance above the graft.

The object of pruning young trees is to produce a tree with a regular, open head, with radiating branches, as nearly as the habits of the tree will permit, from a central stem, obliquely ascending to a certain angle. Lindley's observations on the regularity of a well-pruned tree, are practically correct; he says, if this be effected at first, there will be no difficulty in keeping it so afterwards; but particular care must be taken in pruning, to cut to that bud immediately on the *inside* next to the centre of the tree, or to that immediately on the *outside;* by these means, on viewing the tree from the outside, the branches will appear in a perpendicular line from the eye; whereas, if pruned to a bud on the right or left side of the branch, the young shoot will be produced in that direction, and every branch will appear crooked, the regularity and beauty of the tree being thus destroyed in one year's pruning.

As to the proper time for general pruning, there are two seasons of vigorous growth, the one in May, the other in July, and the critical period appears to be just after the July shooting has taken place; then the wood will be firm, and the fluids of the tree, although not quite inactive, will be in a state of comparative quietude, yet producing granulation over the wounded surfaces; but if the branches be cut back at or before the season of the July shooting, the lower buds will be stimulated to produce in most cases a multitude of weak shoots, all of which must afterwards be cut out, or if one only be left, it has to undergo the same treatment, and with a similar result: thus, time is lost, the powers of the tree are taxed to no purpose, and no fruitful buds are obtained. The *winter* pruning may be understood as that period just preceding the enlargement of the buds in March or April, because the fluids,

excited by the spring influences, are ready at their first flow, to heal the wounds, and produce the depository of new vegetable matter: it is the torpid condition of a wound which causes disease under the action of cold frosty winds, snow, or protracted wet during the winter. But some object, that a tree will bleed, if the knife be used in the spring; facts, however, do not bear out the assertion that injury will arise from this circumstance, even in the case of the vine, although the watery sap from that tree will flow from the point of the wound for days. If care be taken to prune young trees properly for the first three or four years, they might then be left to themselves in a great measure, to form the figure which the nature of the variety inclines it to assume."

Pottsville. J. E.

A new Variety of Grain.

An English paper gives an account of a new variety of grain, of which a trial has been made this season, though not to a sufficient extent to test satisfactorily its usefulness. The account states that last year a mechanic in Bedale, Yorkshire, received a letter from a relative in Peru, South America. In it were a few grains of what he called Peruvian barley, which he stated produced two crops from one sowing in that country—that is, when one crop was reaped, shoots were proceeding from the stems, which the same season brought to maturity. From curiosity more than any other motive at that time, these grains were planted in a garden, and those grains that vegetated produced a number of stems each, which came to maturity. This year, not having any place where the grain could be safely sown and taken care of, he was permitted to occupy a bed twenty-one yards long and seven feet wide, in the garden of a lady of fortune in Bedale. Some more of the grain was grown in a little garden of his own, and the produce of one indifferent head was cultivated in the garden of the Rev. John Monson. The corn grew luxuriantly, and produced from some of the grains upwards of thirty stems; from its great height and luxuriance, it suffered from the severe weather in July, but it was cut the 10th of August. There were some green stems growing from the root at the time, but not sufficient to justify the expectation of a second crop in that climate. The grain when standing, has the appearance of barley, but is much whiter, with a long beard or awn. On being pulled and rubbed in the hand, the awn comes off with the husk, and leaves the grain bare like wheat, to which it bears a stronger resemblance than to barley, and by some considered a species of wheat. One hundred pounds sterling was offered for the produce of the small plat above mentioned, on which the crop, notwithstanding the disadvantage of the season, was very great. This sum was refused, the owner expecting to get more by selling it in small quantities.

There is no doubt the variety of grain here mentioned is the Emur, described at p. 183 of the Cabinet for January, and which produced on the farm of Mr. Gowen, Mount Airy, a sample weighing sixty pounds per bushel; coming to maturity, under unfavourable circumstances, in about three months from the time of sowing—from the 6th of April to the 16th July: its description is precisely the same.—Ed.

Quality of Milk.

Several cups have been successively filled while milking from one cow, producing the following results: in every case, the quantity of cream was found to increase in proportion as the process of milking advanced: in different cows, the proportion varied, but in the greater number the excess of cream in the last cup as compared with the first, was as 16 to 1; but, as in some cases the difference was not so much, a fair average might be considered as ten or twelve to one. And the difference in the quality of the two sorts of cream was no less striking, the cream given by the first-drawn milk being thin, white, and without consistence, while that furnished by the last, was thick, buttery, and of a rich colour. The milk remaining in the different cups presented similar differences, that which was drawn first being very poor, blue, and having the appearance of milk and water, while that in the last cup was of a yellowish hue, rich, and to the eye and taste resembled cream rather than milk. It appears, therefore, from these experiments, that if, after drawing seven or eight pints from a cow, half a pint remains in the udder, not only almost as much cream will be lost, as the seven or eight pints will furnish, but of such a quality as gives the richest taste and colour to the butter. This fact has been corroborated by chemical experiments, and holds good with respect to the milk of all other animals. Blacher's Essay.

Of all animals, of whatever kind, those with the smallest and cleanest bones, are generally the best proportioned, and covered with the best and finest-grained meat; they are the hardiest, the healthiest, and best feeders; able to bear the most fatigue while living, and worth the most per pound when dead.—*Culley.*

Holkham Hall,

Renowned as the Seat of the Earl of Leicester, better known as "Mr. Coke of Holkham."

In no part of Great Britain is to be found a finer specimen, either of the style of life of a country gentleman, or of the management of a first-rate practical proprietor's estate. In the year 1776, Mr. Coke moved, in the English House of Commons, the discontinuance of the American war — which was carried by a majority of *one* — and headed a committee to take up an address to the King, in pursuance of the vote, in his white-top boots and frock — his customary dress — and every American must respect him for the achievement: nor will they regard him the less, when they are told, that every day at his table, during the whole of that barbarous war, he was accustomed to drink the health of the greatest man in existence — General Washington; and this liberal spirit has always distinguished the man, who, were he now in the House — which his age, 82, prevents — would be, by many years, "the Father of the House of Commons."

The extent of Holkham is about 3500 acres, nearly surrounded by a high brick wall, about ten miles in circuit. This comprises plantations of wood, and a beautiful lake of water, and nothing can appear more rural than its borders, completely overshadowed with forest, and wild as in the depths of some solitude of Michigan. All the woods have been planted — the work of his own hand — the whole estate being plentifully sprinkled with various species of trees, arranged in coppices, in acres of forests, and long avenues; so that, instead of a vast park in one body, it is everywhere an ornament and a shelter, over hill and dale, nowhere in excess or in the way of the farmer. Immediately around the mansion are gardens, delightful walks, and a wide extent of velvet lawns on every side; but these are marked by their own schemes of practical utility, for here may be seen the stately pheasant and the graceful deer, that feed and browse and bound about on these soft lawns, and enjoy the seclusion of the cool shades in perfect security. These are charms to the eye, and exhibit the tasteful elegance of the noble proprietor. Here are woods, too, and while riding through their long winding lanes, one is charmed with the perfume of forest flowers of most exquisite fragrance, and the chirping and fluttering of birds—the yellow-hammer, whirling on his gay speckled wings; the shining blue jay, glancing "like the javelin by," and the woodpecker "tapping at the hollow beech tree."

The remoter lawns are sprinkled over with flocks of sheep — of which more than three thousand are kept — of the famous South-Down breed; and in the pastures are to be seen the fine, sleek, bright-looking Devon cattle, browsing in herds, more than three hundred in number, besides an immense dairy of Scotch cows. Beyond these pastures, one comes at once into the midst of cultivation, and a ring of this, skirted and sheltered here and there with avenues and copses and trees, encircles the whole estate. Here may be seen a field of one hundred and thirty acres in barley, another of sixty acres in wheat, with fields of peas twenty-five and twenty-seven acres each; the arable lands being divided about equally between these grains, and turnips and grass, which crops, sometimes having grass for two years, constitute the routine of the succession of tillage on the same ground. There are in cultivation at this time, about four hundred and thirty acres of wheat and barley, each in fine condition; in the steward's estimation, thirty bushels an acre are indifferent crops — forty and fifty, more the "right thing."

It must never be forgotten, that Holkham has literally been made what it is by Mr. Coke. When he succeeded to the estate it was a mere waste; not a tree, nor was it believed that the land would grow them — the only creatures that could *exist* upon it were rabbits, and they were starving! Now, what a triumph is here! But go into the village of Holkham, which belongs virtually to the estate, and subsists by it in one way or another. Here are five hundred persons probably, with cottages that are a *curiosity* of rural neatness and comfort; delightful gardens surrounding them, with flowers hanging around the windows and over the doorways! About one hundred and fifty persons are employed on the *Farm* alone; those in the gardens, which are surrounded by a wall one thousand four hundred yards long and fourteen feet high, are perhaps forty more; in the brick-yard twenty; in the smith's shop ten; — with carpenters, bricklayers, wheelwrights, game-keepers — a little army of servants without; while in the mansion, besides male servants of every grade, twenty females are employed when the family are present. Women also assist in the labour of the farm, in hay and grain harvest, as well as in weeding and hoeing the crops, which are all drilled.

Beyond, and outside the walls of the regular estate, is another plantation of six hundred acres more: here all were hard at work sowing turnips, all the parts of the process going on at the same time—twenty men and boys spreading manure from five or six carts drawn by three horses each (one hundred being kept); half a dozen ploughs with two,

without a driver; cast-iron rollers with two; three and four harrows with two; drill machines with two, with harrows again, bringing up the rear. And to crown all, the noble asylum for the old, and schools for the young! Truly this is one of Nature's Noblemen! Here, the sons of gentlemen come from all quarters to learn the science of agriculture, under the care of the steward, the whole establishment being a model both of the science and practice of farming.

Boston Transcript.

To the Editor of the Farmers' Cabinet.

Sugar Beets for Cattle.

Mr. Editor, — I find in an Eastern paper two accounts of the successful feeding of the Beet, which please to place against other two, which might easily be met with, "all the other way," in Eastern papers also, and oblige A Constant Reader.

1st. — "In 1838, I put up 300 bushels of beets, 100 bushels of turnips, and some potatoes, for the purpose of an experiment on root-feeding cattle during the winter. At first I was at a loss to know how to feed them, whether in a raw state or boiled; but having determined to try both, I commenced the work and found each to do well. My young animals throve astonishingly on them while raw, but for milk cows I consider them better after cooking; these, however, might be fed with raw beets once in every two or three days, to great advantage. The turnips and potatoes were given precisely in the same way, but I could not perceive that either had the preference, except that, in feeding the beets, it was easily told that one third less than of the turnips or potatoes would make them give the same quantity of milk, of better flavour, and the animals showed better keep; the beets made the milk better, the butter better, and the cows better. On one half bushel of beets per day to each cow, with straw and a little meal or bran mixed, they continued in good condition through the winter, gave as much milk as in summer, and the butter was full as good as in May: my experience during the present winter only confirms my former conclusions."

2d. — "We have had no experience with the Sugar Beet, except in the feeding of a single milch cow the present winter: we give from two to three pecks per day, with a good supply of fine hay, of which, however, the animal consumes but little; nor will she but seldom drink a pail full of water. The result is, we have a greater supply of milk than when no beets are fed, and it is of the very best quality; but the cow is thinner in flesh than we could wish. We cannot induce our hogs to touch a beet."

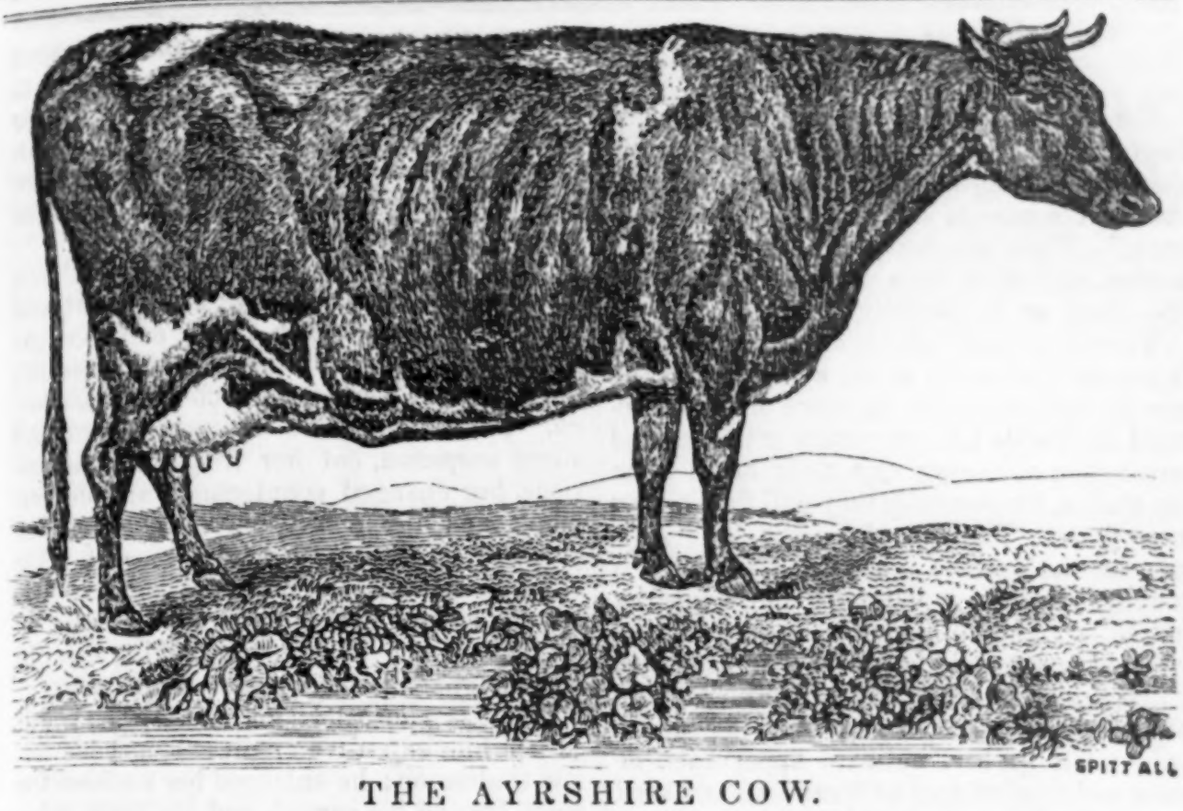
Sheep Husbandry in America.

In the culture of grass for pasturage, preparatory to grain, the profit of sheep husbandry in America must be very great: there is every advantage of soil and extent of farm, and no drawback but that of labour — and pasturage demands scarcely any labour; so that, if there is one system that squares more than another to the circumstances of America, it is the adoption of a course that embraces the culture of grasses most extensively. Wolves and dogs are named as a reason for not keeping sheep, but they abound all over Europe — and so do sheep. No wolf or dog could get into my sheep-fold by night, and by day a watchful shepherd is a sufficient protection. While sheep are kept by *dozens*, such objections may hold good; but when by *hundreds* and *thousands*, they instantly vanish. Surely the value of wool must instigate to an increase in the breed of sheep, even if it be for exportation, the freight, when it is pressed into a small compass, being a trifle, and the fleece alone, from extensive American lands, without reckoning the carcass as anything, must be more valuable than the *profit* on a crop of wheat at a dollar a bushel, especially on lands producing white clover spontaneously.

Suppose, on some of the lands which might be bought for five dollars an acre, or twenty shillings sterling—the rent of this is, say twenty-five cents: now such land, by carrying but one sheep an acre, producing 5 lbs. of wool, worth only 25 cents per lb., and the mutton doing no more than paying for losses, shepherding, &c., here is a profit such as corn cannot rival — five rents paid by wool alone! But the mutton of well-fed sheep, if carefully salted, would find a ready market, if not at home, in the West Indies; and if sold at 2 cents a pound above expenses, the object, on a large scale, would be highly important.—*Arthur Young.*

Potatoes raised from Cuttings of the Stalk.

Mr. Cotselt says, "I was induced in the spring to try an experiment on cuttings of the potato stalk, and have succeeded to admiration, having produced from thence a good crop of full-sized potatoes, many of which weighed half a pound. The method was this: when the potatoes were about nine inches high, I cut off the tops about six inches long, planted them in line, about eight inches apart, with a flat dibble, pressing the earth carefully around them, gave them water, and hoed them as an ordinary crop. I produced this way at the rate of 140 lbs. per rod."



THE AYRSHIRE COW.

THE above is an excellent likeness of the Ayrshire Dairy Cow. Its very great dissimilarity to the beautiful animal whose portrait is given at p. 193 of the Cabinet for January, will account for much of the "conflicting testimony" which exists with regard to the origin of the breed, as well as their milking properties: and thus the opinion of John Lawrance, that "they were a produce from a cross between the Alderney and the Scotch cattle," and Youatt's declaration, that "any one would be convinced from a single glance that this supposition is altogether groundless," are easily reconciled. The fact is, the present improved and fashionable race of Ayrshire cattle are, comparatively, of late origin, and their compact and symmetrical form has arisen, no doubt, from a cross with the short-horn or Holderness breed — it is to be feared, at the expense of their deep milking properties; while the breed of which our present engraving gives a most striking and faithful delineation, is *any thing* but what is said in the account given at p. 193—"an animal with hind quarters large, back straight and broad behind, carcass deep, and pelvis capacious, wide over the hips, with round buttocks; all parts of least value small, and the general figure compact and well proportioned;" comporting, rather, with those descriptions which, although they are given by persons confessedly well acquainted with the breed, are as opposite as *flesh* and *bone* can well be. Mr. Aiton says, "the Ayrshire cattle, 50 years ago, were of a diminutive size, ill fed and ill shaped; the chine of the back high and narrow; sides lank, short and thin:" and Rawlins describes them faithfully when he says, "they have *another* breed which are allowed to be the best race for yielding milk in Great Britain and Ireland, not only for large quantities, but also for richness of quality, and are said to have been produced by a cross with the Alderney bull and their own cows; they are much leaner and thinner than any other Scotch breed; are not deemed a handsome race, but the contrary; yielding, however, more milk daily than any other breed;" while it is added, they are deep in the carcass, but not round and ample, and especially not so in the loins and haunches; it being suspected that an improvement in their shape, and an attempt to produce fat and sleeky cattle, has been effected at the certainty of diminishing their value as milkers.

It is, then, from the peculiar breed which we are now delineating, that such very great quantities of milk and butter have been drawn; Mr. Rankin declaring that he has seen 36 quarts of milk taken in one day, while he possessed a three years old cow, which, for six weeks after calving, gave 28 quarts a day: Mr. Aiton also calculated upon an average of 5 lbs. of butter per week the whole year round, or 514 lbs. of sweet milk cheese per annum, besides the whey and calf; adding, "To sum up all, hundreds and thousands of the best Scotch cows, when in their best condition, will yield at the rate of 1000 gallons of milk a year, 3¾ or 4 gallons of which will yield a pound and a half of butter;" and Mr. Ralston says, every cow in his dairy, about 120 in number, yields him her own weight of the best cheese, and for which he obtains the value of the cow annually.

The portrait, from whence our engraving has been made, was brought by Edw. Harris, Esq., of Morestown, N. J., from Scotland, where he saw whole dairies of this peculiar breed of cattle.

To the Editor of the Farmers' Cabinet.

The Intemperate.

Sir,—The following Portraits are copied from "An address to the citizens of Philadelphia on the subject of establishing an Asylum for the cure of the victims of Intemperance." They are drawn by the hand of a master, and must have been done from the life—they are so fearfully faithful!

There is no charitable endowment that can, in my estimation, be at all compared to the one in contemplation, or more likely to reward its friends and supporters with the solid satisfaction of having cast their bread upon the waters, for assuredly they will find it after many days! The idea of founding an "Asylum for the cure of inebriates," is noble, is generous, and must call forth the sympathy and willing hand of every feeling heart; the evil which it seeks to cure is a lurking foe, which has crept into many a dwelling where few would suspect to find him; for under many a fair garb of outward appearance of peace and comfort does he tyrannize, and shed his baneful influence on the fairest hopes and prospects of future happiness, blasting the inward peace of many a family circle, and rendering the sanctuary of *home* no longer the place of "altar fires."

The address considers the victim of Intemperance as afflicted with "a disease of the stomach and of the nervous system," and very properly asks for the erection of an asylum for the cure of this disorder, as well as for the sick, the lame, the deaf and dumb, the blind, the insane; for those lost to virtue, and for those condemned by the laws—establishments for which our city is justly famed—and where the slave of intemperance might be "saved from himself." It asks for the means of erecting a Hospital for the cure of this *hydrophobia*, and assuredly there is not a temperate man in society who will not gladly contribute according to his ability towards such a charitable purpose; my mite will be ready at any time, and in perfect sincerity shall I devote my best efforts to the support of a cause so holy and righteous.

Your subscriber,

D. W.

Philadelphia, March 15, 1841.

Family Portraits.

"How many are there in the bosom of our families, surrounded by all its endearments and comforts, and yet who destroy the peace of these once happy homes! There is the only son of a widow—a widow by intemperance: at her lap he often knelt in childhood and lisped the prayer which many mothers teach their children; she felt he was her hope and consolation, and to self-denial upon self-denial she cheerfully submitted, in order to train him up to manhood, and her object was accomplished—he became to her and to his sisters an honour—their support and their pride—but, alas! he also became intemperate, and sorrow came upon that family more than when the husband and father had fallen into the drunkard's grave!

There is a wife! her house and children once showed care, economy, and comfort, and her husband went forth to his daily occupation with hope, and returned with pleasure; but now, that home is neglected and disordered. For awhile, there was only a faint and silent suspicion, but her frequent indispositions, her changed countenance and deportment, and the concealed vials about her dwelling, made it no longer a secret! Her children and husband may still be near her, but her affection for them is not so strong as for that which will deaden a craving appetite and the gnawings of a diseased stomach!

There is a husband! his industry and worth gained him extensive credit amongst his fellow tradesmen; he enlarged his business too much beyond his capital, and his festal table was too often spread; the well-meant offer of an occasional glass of wine from his sideboard was too often made; bankruptcy ensued, and then wine became his flatterer, then his master, his tyrant, and his death! and all that is left is a cheerless remembrance of a lovely family blighted in its early bloom!

And the circle of domestic life, *the very heart of society*, contains many of these victims, every where and in various forms—the farmer, the mechanic, and merchant—the man of science, the minister, physician, and lawyer—the statesman, military men, and office-holders disturb by intemperance the peace of home, and there implant *a gnawing grief;* and in some instances bring down upon themselves the extreme penalties of the law: and why? do these inebriates know the cause? do their distressed relations and friends know it? the common evil is, *a stomach diseased by alcohol!* But they are fellow-beings under disease; they need a physician, and that physician requires for his patients such medical appliances as meet the necessity of the case; the most important and indispensable of which is, a long separation from the cause of their disease—*alcoholic* drink; and an appropriate asylum or retreat, under medical supervision, would meet this object."

A *kind* soil is an exhaustless source of amusement to the rational possessor; an *untoward* one the plague of his autumns, the pest of his winters, and the never-failing curse of spring.

To the Editor of the Farmers' Cabinet.

Expenses of Farm Labour.

Sir,—In the speech of the President of the Philadelphia Agricultural Society at their last general meeting, it is stated that Mr. George Walker, an Englishman, who I find resided in Holmesburg, in the vicinity of Philadelphia, always declared that his farm-work was done twenty per cent. cheaper in Pennsylvania than in England; and I find in an English work, which I am now perusing, a statement of expenses which corroborates the truth of the assertion, and will, or I am much mistaken, satisfy any one of the correctness of the view taken of the subject in that very interesting address. Permit me to copy the following from a late work on British Husbandry; it is the expenses of making hay in the vicinity of London.

"The expenses of making hay, consisting chiefly of labour, vary, of course, in different places. Those in the district around London being the highest, we shall state according to the last estimate, as they may be reduced according to the rates in other parts, and are as follows: The expense of mowing varies from four to six shillings per acre, according to the crop; but the general price is five shillings. It is generally calculated that an expert mower will cut an acre a day if the crop be heavy, if light, he will do more. The crop might be estimated, on an average, at a load and a quarter an acre. The making of the hay after cutting, including the wages of all the labourers employed in tedding, carting, and stacking—but exclusive of any charge for horse-labour, which being performed by the farm-teams is not included—is from ten to fifteen shillings per load, as the weather proves wet or dry, and the crop light or heavy; say, average twelve shillings. Men and women will, upon an average, drink about four quarts of beer each per day, at sixpence per gallon—say about two shillings an acre for beer—but when the days are hot the men at the stacks and with the carts have a more liberal supply; these charges therefore amount to,

Mowing per acre	5	shillings.
Making do	10	"
Beer do	2	"

On an average of soils and years, the crop may be about one load and a quarter of meadow hay per acre when cut from the stack; consequently the expense of a load will be as follows:

	s.	d.
4-5ths of the above sum	13	6
Thatching stack	1	6
Cutting and binding hay for market	2	6
Carter for taking to market and toll-gates	2	6
Salesman for selling at market	5	0
	£1	5 0

The actual outlay in money is, therefore, 25 shillings per load, to which must be added the expense of the team, according to the distance to which it must be carried, and which may be safely estimated at about ten shillings at the lowest; and as every farmer is bound by his lease to carry back a load of dung, or other equally efficient manure in return, *that* will cost about four shillings more; so that the whole charge cannot be calculated at less than two pounds sterling per load. This account differs but little from that furnished by Mr. Middleton in his survey of Middlesex, but he estimates the entire expense of tithes, taxes, field-labour, and manuring once in three years, at five guineas per acre, exclusive of rent."

But will not our Pennsylvania farmers be surprised to hear that an acre a day is work enough for an expert mower to cut, and a load and a quarter of hay per acre is a fair average crop, the load weighing 18 cwt. only?

Subscriber.

Experiments with Bone Manure.

An acre of land was laid off and divided into eighty-one equal parts, by cross furrows; upon two-thirds thus laid off, a two-horse cart load of stable dung was laid in each square, being at the rate of eighty-one loads per acre. To other parts of the ground, crushed bones were applied at the rate of 15, 20, 25, 30, 40, 50, 60, 70, and 81 bushels per acre; while on the residue of the acre a compost of the shovellings of the cow-yard, with eight per cent. of bones was applied, at the rate of 12 loads, at 25 bushels per acre. The whole land had been previously well worked, and dressed with 60 bushels of lime per acre; the compost and bone manure were harrowed in by a heavy drag, and the whole was sown with turnips on the 8th day of August.

The growth of the crop on such parts of the land as had received not less than sixty bushels of crushed bone per acre, was quite equal, in the end, to the best growth of that which had received eighty-one cart-loads of stable manure per acre; whilst the growth on all smaller allowances of bones was inferior, and most so, where the least quantity was used; but on that portion of the ground which had been dressed with the bone and cow manure compost, the growth throughout was decidedly superior to any other part; the product, at maturity, being at least one-third more than was produced from the land manured from the stables. With this same compost, a poor piece of newly-mown meadow (in 1838), was dressed at the rate of 100 bushels per acre; the succeeding crop was more than doubled by the operation; the crop of the present year (1840), was still better,

and from the after growth, I have little doubt of farther and progressive improvement for many years to come.

The conclusions to be drawn from the above are: 1st. When applied at the rate of from 50 to 80 bushels per acre, one bushel of crushed bone is more than equal to 25 bushels of good farm-yard manure in its effects on the first crop. 2d. The effect of bone manure is more durable than that of any putrescent manure usually produced on a farm. 3d. When applied to land in good heart, the effect is much more powerful than on poor land. 4th. When combined with manure, and applied in the form of compost, the effect, both instant and remote, far exceeds any other application of the components when separated, with which I am acquainted, or ever witnessed. And lastly—if stable manure has to be purchased, or even hauled more than half a mile from the stable, bone manure, at 50 cents per bushel, is the cheapest manure of the two.—*Farmers' Register.*

For the Farmers' Cabinet.

"Too big to Work."

THOSE WHO FEAR WORK SHOULD DREAD POVERTY.

The thorough cultivation of the farm and the proper education of the children, are the two great subjects that should engage the attention of every farmer. If the former be neglected, poverty and want will sooner or later be inmates of your domicil, and it will require more than ordinary diligence and good management to drive them thence; and should the domestic education of the young ones be overlooked or disregarded, and they be suffered to grow up in habits of idleness, disregardful of economy, either of time, money, or money's-worth, trouble will be your lot all the days of your lives; and if you want proofs of either of these propositions, make inquiry amongst your neighbours, and you will find them as plenty as blackberries.

In times that have now passed by, the heads of families looked forward with pleasure to the period when their children should be "big enough" to be serviceable to them, "to work," as we used to call it; but alas! how things have altered since I was a boy! for now we look forward with dread to the period fast approaching, when our boys and girls shall think themselves "*too big to work;*" too conceited to be under parental control.

Where parents loose the reins, the team will soon be off the right track, and the only way to keep possession of them is to be constantly on the alert, to keep every member of the family close up to their work, for Satan is always found furnishing employment to those who are not otherwise engaged.

'78.

For the Farmers' Cabinet.

Farm for the Indigent Poor.

Mr. Editor,—I have been exceedingly interested with an account of the farm on Thompson's Island, situated in the harbour of Boston, which has been purchased by a charitable Institution, for the purpose of forming a retreat "for the education and reformation of boys, who, from the loss of their parents, or other causes, are exposed to temptation, and are in danger of becoming vicious or useless members of society. It contains 140 acres of land, and was purchased for $6,000. The main building is 105 feet long, by 36 wide, with a projection 39 by 25 feet. The dining hall, school-room, and bed-rooms 48 by 33 each, and the family rooms, about 20 by 17 feet. It is a neat, substantial, brick building, and admirably adapted to the purpose; clean and comfortable. In the years 1837–8, the estimated annual produce of the farm was $4,500; and the expenses incurred in farming operations, exclusive of the board and salary of the superintendent, and the board of hired men, was about $1,000; about $1,500 each year being realized from the sales of produce which was not consumed on the premises. The establishment is under the direction of a board of managers, the immediate control being under a superintendent, a matron, and an instructor of the school. With respect to the discipline, the object is, to combine moral and intellectual culture with regular labour on the farm. During the season of farming operations, the larger boys assist on the farm, six or seven hours in the day, under the superintendent, who is a practical farmer; the other six hours being devoted to reading, writing, &c.; and in the evenings of winter, instruction is given in the first principles of agriculture, horticulture, and botany; the processes of cultivation, the names, uses, and qualities of seeds, plants and trees, &c.; Sunday, and other religious instruction being constantly kept up. The object is, to make the boys skilful farmers, and they are, therefore, taught to prepare the ground, sow the seed, and reap the crops, hoe, and weed, and gather in the grain and vegetables. The persons employed at present are, a superintendent, a matron, a teacher, two farmers, and four female attendants; the number of boys eighty, whose ages average 14 years. During the past year, an extensive piggery, more than one hundred feet in length, with suitable yards, have been constructed; the stock on the farm being 4 oxen, 14 cows, 1 horse, 20 sheep, and 50 swine; the ploughed land is 22 acres, of which, 6½ acres were rye, 7 Indian corn, 6 potatoes, 1 acre ruta baga, 1 acre sugar beet, one-eighth acre carrots, one-eighth acre gar-

den vegetables, one acre turnips, as a second crop; the mowing ground being 30 acres.

The produce of the farm for the last year was,

150	bushels of	Rye,
400	"	Corn,
2500	"	Potatoes,
1000	"	Beets,
800	"	Ruta Baga,
500	"	Round Turnips,
10	"	Beans,
200	"	Carrots,
75	tons of	Hay,
10	"	Marsh Hay,
15	"	Straw,
12	"	Corn Tops and Butts,
200	pounds of	Butter,
4500	gallons of	Milk,
10		Calves,
6	barrels of	Apples,
400	pounds of	Citron Melons,
300		Musk Melons,
300		Water Melons,
15	Ox cart-loads	Pumpkins,
1000		Cabbages,

Increase on swine, $300.
Poultry, $20.

Amounting in the whole to.....$5,751 50

Outlay for cultivating, exclusive of interest on value of farm stock, tools, &c..... 500 00

Balance.....$5,251 50

Now, Mr. Editor, is there any reason on earth, why this system should be confined to *Houses of Refuge?* In every public charitable institution, there are many individuals, even of tender age, who might be made exceedingly effectual in the operations of a farm. Unlike the *Arts*, as they are called, the duties and exercises of agriculture can be entered upon and practised without previous instruction, a little time only being necessary to make perfect. A great deal of the planting, sowing, weeding, and gathering might be done by very youthful hands; and the care and attendance of the lesser animals, poultry, &c., would be exceedingly appropriate to such; while in the horticultural department they would often be found of superior usefulness; indeed, it appears clear to me that such an institution, if properly conducted, could be carried on in any situation, and to any extent, not only without loss, but to considerable profit, the outdoor labours serving rather as recreation than otherwise, and be the means of introducing a perfect system of management throughout the country, by the instrumentality of its juvenile portion of inmates, who might thus be made to acquire a scientific knowledge of its different branches, and be sent abroad, at a suitable age, as practitioners of superior attainments, throughout the length and breadth of the land; indeed, from such an institution young men of very superior attainments in the science of agriculture and the rural arts, might be supplied as from a college—making, what might be very properly termed, *a virtue of necessity.* Carpenters' and smiths' shops should be attached, where all the implements which are used should be made and repaired by the inmates of the institution—the fencing, gates, buildings, &c., being done by the assistance of youthful hands, that each one might become acquainted with the way of doing those things, which would prove of paramount importance in their future plans of destination, perhaps as pioneers in the far, far West!

Now, I wonder who is destined to become celebrated in the future history of his country, by devoting his wealth and talents to the formation of such a noble institution! a blessing to himself and to those who are ready to perish? I know not that I at present envy any one their possessions, except the owner of that most admirably adapted estate on the Haddonfield road, a mile and a half from Camden, which would appear to have been planted there for the express purpose of "A farm for the indigent Poor." What an opportunity has *he* of laying up treasures "where neither moth nor rust do corrupt, nor thieves break through and steal;" and erecting for himself "a mansion in the heavens" with "everlasting pillars and eternal butments."

J. C. D.

New Jersey, 18th March, 1841.

P. S. Is it not strange that persons who have property to *invest* in charitable institutions at their death, should deprive themselves of the opportunity of managing it in the way they would approve, during their lifetime? especially when they see how easily the plainest directions can be MISTAKEN when the donor is not present to enforce his plans. There can be no appearance after death, or Stephen Girard, one would suppose, could not lie quietly in his grave.

To the Editor of the Farmers' Cabinet.

Friesland Sheep.

SIR,—The article in your January number, on Friesland sheep, with the offer of their owner, Mr. Benedict Boone, to supply a few couples of lambs the next season, may probably lead some of your readers to desire a farther account of a kind of sheep that would appear very desirable as stock for many parts of the States; and finding mention made of them in Youatt's late work on sheep, I copy it, for insertion in your pages. Your subscriber,

J. F.

"In Friesland is a breed of sheep of a large size, measuring sometimes two feet nine inches in height, without horns, having pendent ears, a head so long as almost to approach to deformity, and the tail long and small, and generally devoid of wool. The

wool is long, finer than some of the other Flemish and Dutch races, and with more numerous curves, and can be appropriated to more valuable purposes. They have considerable resemblance to the British, or rather the Irish long-woolled breed, but they have never quite cast off their original lean appearance and disinclination to fatten. They are more prolific than any English breed: their milk is valuable and is used in the manufacture of a considerable quantity of cheese of good quality.

An anonymous French work, but published by royal authority, in 1763, describes this breed of sheep by the name of *Frises* — the wool curled, frizzled at its extremity, as uniting in itself the perfections belonging to every other breed, without their defects: its walk is firm, its deportment noble, its form well proportioned in all its parts, announcing a good constitution and a healthy temperament, and exempt from the maladies so common to other breeds. The length of its wool is in proportion to its height, and it does not disfigure the animal as in the English sheep, whose fleece is a burdensome weight, especially at the return of spring. He carries nothing about him that in the least detracts from his beauty: his wool is white and without spot, and of a dazzling whiteness: he is contented everywhere, and everywhere he becomes a citizen of the place he inhabits." The carcass weighs from 90 to 130 pounds.

For the Farmers' Cabinet.

Value of Lime in Agriculture.

Mr. Editor,—It is said at page 55 of the Cabinet, Vol. 5, that Lime to the amount of 500 bushels per acre has been laid on land in England, to manifest advantage; while here, 60 or 80 bushels have been found too much. I see in a work at present before me, that in Ireland it is not uncommon to apply it at the rate of 400 bushels per acre, immense crops of potatoes having been raised by its being laid upon strong old lays broken up in July and August, and suffered to remain in that state until ploughed again in the spring. Dr. Anderson says he has had experience of it in all proportions, from 100 to above 700 bushels per acre, upon a great variety of soils, and that he always found its effect in promoting the fertility of the soil to be in proportion to the quantity employed, other circumstances being alike; yet an instance is mentioned in the Nottingham Report, of 750 bushels having been laid on an acre of cold clay soil, without any benefit whatever: experiments have also elsewhere been tried of its application on heavy land extremely retentive of moisture, to the extent of 550 bushels per acre, which, after eight successive years, showed no perceptible difference arising from the quantity laid on: it has, however, been on so many occasions used at random, without inquiry being made, or attention paid to the state of the land, that without regard to these particulars, much money has been uselessly expended, and many attempts at improvement by it have been rendered unsuccessful. A system prevails in the cultivation of many estates in various parts of England, under which the tenants are bound by their leases to fallow the land at fixed periods, and to dress the fallows with a certain quantity of lime — in some parts of Kent to the amount of one hundred bushels per acre — this period recurring generally every five years. Its greatest value has, however, been found on heathy moors and wild mountain-land, where, by spreading it in large quantities and permitting it to become washed and grown in, the most surprising effects have been experienced: after some time the heath and coarse herbage disappears, and the whole surface becomes covered with a fine pile of grass, consisting of white clover and other sorts of fine pasture grasses. It is labour lost to lime soils that require draining — be this always remembered. P. W.

The Fatted Calf.

Amongst the many splendid *presentations* to the President, on the day of his inauguration, none will appear more in true keeping, to the readers of the Cabinet, than that which our *friend*, Mr. Isaac Newton, of Springfield, Delaware County, Pa., had prepared for the purpose, namely, a fatted Calf, weighing 384 lbs. It was neatly dressed by his own hands, and was brought to Washington well preserved, packed in ice. It need not be added that the President received the offering with an expression of his great regard for the agricultural interests of the country; taking occasion, in his reply, to compliment the Friends as being amongst the best of citizens and the best of agriculturists. Mr. Newton's address to the President, on the occasion, must be preserved: it is worthy the imitation of all who might be called upon future occasions to address "the Executive;" it is plain, and goes at once to the point, and, what will not be relished the less by any one, pithy and short. "W. H. Harrison, President of the United States: I present to thee 'the fatted Calf,' from Springfield, Delaware Co., Pennsylvania, as a mark of gratitude, on seeing the honest yeomanry of our country advanced to the high station of the chief magistracy; and trusting that thee, with thy ruling arm, may set an exemplary pattern to the American people, such as was given to us by the immortal Washington."

To the Editor of the Farmers' Cabinet.

Agricultural Wages and Living in Ireland.

Sir, — I have not been so long from Ireland, but that my remembrance enables me to bear testimony to the truth of the axiom contained in the first paper of last month's Cabinet, entitled "Cheap Land and Low Wages." That account reminds me very forcibly of the past and present state of that grain and provision-exporting country, where the inhabitants are oftentimes in a condition of starvation, while the productions of the land are sent abroad at a price so low as to enable the exporters to undersell the English markets! Nay more—it is a fact, that while the contributions of charitable individuals and institutions, "for the relief of the starving Irish," have been landing at one port, exportations of the means of existence, in the shape of potatoes and beef and pork and butter, have been going on at another, at the same instant!

I am not an Irishman by birth, but the experience obtained by a long residence on the spot, and the means which I now enjoy of contrasting that state of things with what I see around me, convinces me that the President of the Philadelphia Agricultural Society was right, when he said, "Depend upon it, there is no surer sign of national prosperity than high wages;" and I join him, most fervently, in the prayer "that God would grant for many a long year, that it may be the lot of the inhabitants of this blessed country, who subsist by the labour of their hands, to work well, to be paid well, and to live well." There is a picture of Ireland, contained in the Journal of Agriculture, which is so faithful and touching, and withal so in unison with the article above alluded to, that I cannot forego the temptation of copying it for publication in your pages. Ireland has so long been *wronged* that I fear it will require many years to *right* her; but I bless God that I have escaped from that spirit of bondage, and can walk erect in a land of light and liberty.

Your subscriber, John Murray.
Schuylkill Co.

"The rate of wages in Ireland varies from a shilling to six pence a day (the Irish shilling being twenty cents only) *without food*, and from six pence to three pence with diet: in the neighbourhood of towns, the labourer has never less than ten pence per day without food, but in other parts, eight pence per day is the highest. Women and boys earn from five pence to three pence per day, their employment being limited to particular seasons. In the most favourable circumstances, the labourer does not earn more than a dollar a week, *without diet*, or seventy-five cents *with* it; but when task work can be obtained, he works zealously and at extra hours.

The occupier of a cottage on a farm is bound to work for the farmer at the rate of four pence or five pence per day with diet, whenever called upon by his employer, who is of a class too often oppressive and exacting: it may, however, be given as a general rule, that three days' work in the week is the term of the cottager's obligation for house and cabbage garden. How then could the labourer live on his actual wages without a patch of land on which to raise potatoes? The secret of the matter is, he procures from a rood to an acre for his manure, and in such a case, without any cost or rent — and under these circumstances it will be seen that the substitution of bread for potatoes is quite impracticable. The walls of these cottages are generally seven feet high, built of well-cemented mud, rough-dashed outside, and covered with thatch, the interior consisting of two rooms, with a loft over. For any *inferior* land given to an under-tenant, he is charged at the rate of the *best* land, and with the disadvantage of having a portion of road measured against him, and is charged £1 sterling per acre for ploughing and working his land and covering the seed.

Their principal food is potatoes, with milk in summer, and a single herring amongst an entire family at the dinner meal by way of condiment. They eat meat about three times a year, and eggs but rarely, as these are sold to purchase salt and soap. Oatmeal is frequently used for breakfast or supper during the summer months, when the old crop becomes *bad*, and the new is *unfit for use*. With the great mass of the agricultural poor, their food in each year is entirely dependent upon the production of that year, and of course their distress is always proportioned to the extent of a failure; but since grain, if well preserved, will remain good for several years, the question, as to the substitution of it for potatoes, as a preventive of the chances of starvation and disease from a deficiency of the potato crop, is naturally deserving serious consideration.

Amidst all this difficulty and deprivation, show him but a reasonable hope of obtaining the object of his desire — a bit of good land at a reasonable rent — and the Irish farm-labourer will undergo labours and hardships that would absolutely appal an Englishman: it is no uncommon thing for such an one to walk six or eight miles a day, to and from the place of his employment, in the hope of attracting the notice of the "gentleman" for whom he labours, and obtaining from his kindness the house and bit of land, the object of his extra toil."

For the Farmers' Cabinet.

Peninsula of Delaware.

Mr. Editor,—The communication signed 'Ernest' in the last number of the Cabinet, calling attention to the lands of the Peninsula of Delaware and Maryland, as offering inducements to such as are desirous of obtaining land for themselves at a cheap rate, requires some notice from the farmers of this peninsula. For one, I am firmly of the opinion that such investments would be found to be far more profitable and pleasant than four fifths of the investments made in western lands—where the cost in health and money, in clearing and rendering fit for tillage the wild lands of the west, will be found to exceed the cost of improving the worn-out lands of this peninsula, while the profits of the latter would be more immediate and equally as great. I shall confine myself more particularly to the lands lying within the limits of the State of Delaware. Your correspondent 'Ernest,' in viewing our lands, has taken a flying trip, and, as regards Delaware, has confined himself to the shores of Christiana Creek and the vicinity of Wilmington; but I hope those intending to follow his advice and see for themselves, will not be contented until they look farther into the merits of the soil of Delaware. Let him, at least, see the whole of New Castle County, and inform himself of the price of lands, of the facilities for market, of the cheapness of lime, of the kindness of the soil, and of the liberal and speedy and certain profits that attend a judicious culture, and, my word for it, he will be willing to purchase immediately, provided he can induce any one to sell, which, indeed, cannot always be done, as it is becoming more difficult every year for strangers to gain a foothold in New Castle County: the farmers here are convinced of their advantages, and time will show that our soil will bear comparison, acre for acre, with any of the celebrated Chester County land. That this is not mere *brag*, we might instance many farms which, but a few years back, sold for 10 and 15 dollars per acre—that now produce 50, 60, and, in some instances, 100 bushels of corn per acre, and 25 and 30 bushels of wheat, and are every year becoming more valuable. Who can ride through this County and view the fertile fields in every portion of it, from the neighbourhood of Newark, Christiana, the Buck, St. Georges, Delaware City, and on to the smiling and thriving villages of Cantwell's Bridge and Middletown, without being convinced that it is destined, at no very distant period, to become the El Dorado of the Middle States, for farmers? We venture nothing in the assertion, that in point of health it will compare with the most favoured sections of country; the bilious fever is no more frequent and not so malignant as in the purlieus of the city of Philadelphia, however true it might have been in times that are past. A healthier people are nowhere now to be found, and they bear the evidence of it in their ruddy countenances and robust constitutions.

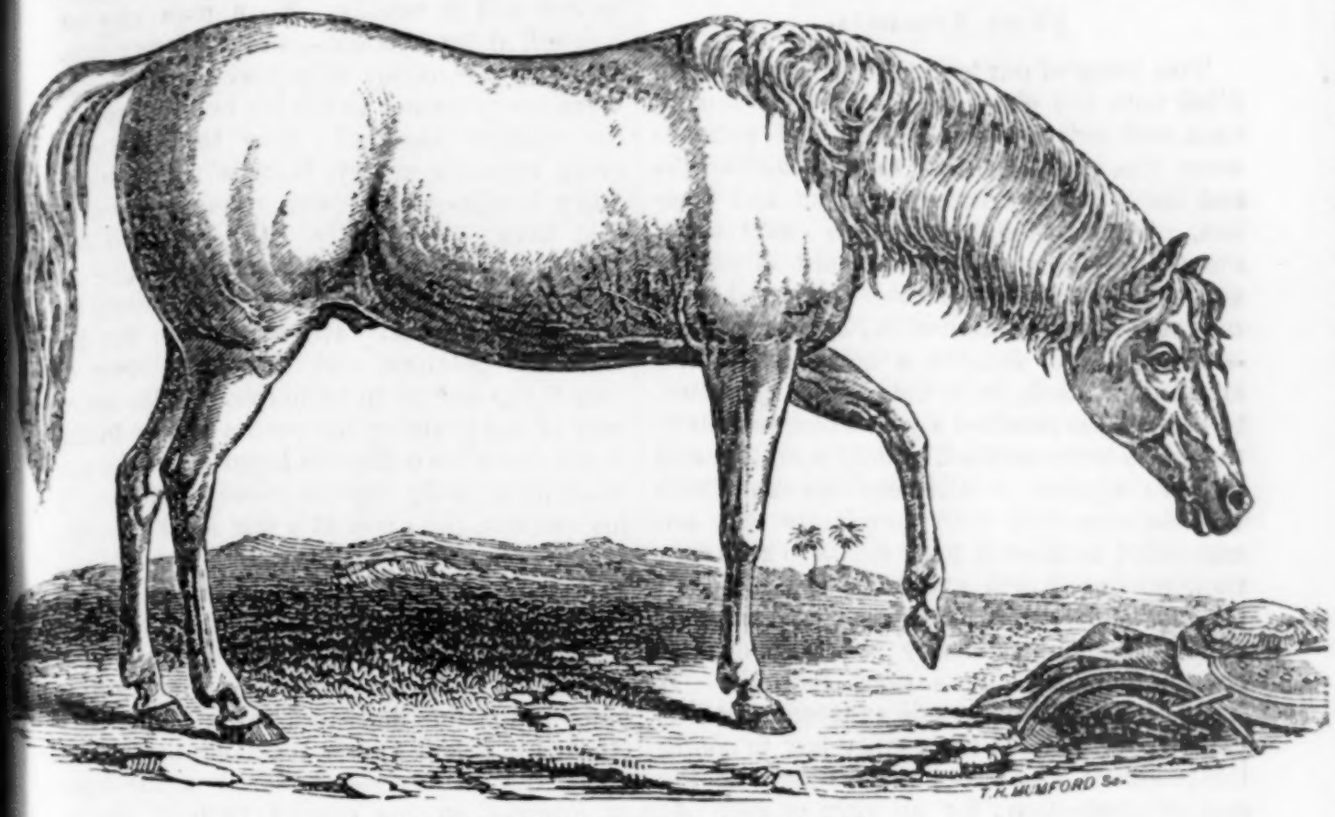
Lands termed "worn out" are becoming scarcer every year, and of course more difficult to obtain. Many enterprising farmers from Pennsylvania and New Jersey have purchased lands and settled among us, and are fast gathering golden returns from a grateful and hitherto impoverished soil.

Stone-lime can be obtained in any part of New Castle County, at a cost not exceeding 18 cents per bushel, and but few farms can be found that would have more than 6 or 7 miles to haul it or their produce: plaster costs from 28 to 35 cents per bushel; the hire of labour is cheaper than in Pennsylvania, and any part of the County is within a few hours' ride, by steamboat or railroad, to Philadelphia. The inconvenience of mills, that your correspondent mentions, is more in fancy than otherwise, I apprehend. A steam mill is already erected at St. Georges, upon the Delaware and Chesapeake Canal, 3 or 4 miles from Delaware City by the canal. Within 3 or 4 miles of my dwelling there are six mills in as many different directions—grist mills, saw mills, fulling mills, &c. We have good millers, good preachers, good doctors, and good lawyers, though not many of the latter profession, and no *use* for more than one half of *them*.

What we have said of New Castle County will, in a great measure, apply to Kent also: their good lands are not yet, perhaps, in so high a state of cultivation, and their worn out lands are more abundant and cheaper; but the greater part of the soil is as good, naturally, and as susceptible of improvement. In conclusion, I would say to those who are looking for lands for a permanent settlement, do not regard this as mere panegyric, but "*come and see*," and test the truth of the above for yourselves. We can give you as good beef and vegetables, fat mutton, and fine fruit, as you can find anywhere.

Your's, &c. J. S. N.

"I am fully convinced that shallow ploughing, and putting a small quantity of manure into the hole, will not do. To insure large crops, we must let down the plough, and fetch up the subsoil to be exposed to the sun and air, fill the land with good manure, and give the crops thorough tending at the proper season."



THE ARABIAN HORSE.

From Low's grand work, "Illustrations of the breeds of Domestic Animals."

The exquisitely beautiful animal, here most faithfully represented, exhibits correctly the form and character of the genuine Arab. He was taken in an assault by an Arab tribe, on a party of the royal family of Persia, when journeying on a pilgrimage. The chief who headed the attacking party was killed, and his superb Charger, galloping into the Persian ranks, was taken: a ransom, enormous for so poor a tribe, was subsequently offered by the Arabs for the noble animal, but was refused, and he was brought to England by Sir John McNeil. He stands fourteen hands and a half high, is gentle in the highest degree, and so thoroughly trained in that kind of exercise which the Arabians are careful to teach their horses, that he may be galloped round the narrowest circle. When his portrait was in the course of being painted, he was languid from the effects of cold; it was wished to rouse him from his lethargy, and the idea occurred of trying the effect of a few tones of simple music—the sounds no sooner reached his ear than his whole frame instantly became agitated to a violent degree; his heart throbbed convulsively, and so great was his excitement that it was found necessary instantly to stop the music! some chord of feeling, it would seem, had been struck—perhaps he was reminded of his desert home, and his friends and companions, from whom he had been so rudely severed. The generous animal is here depicted as scenting the garments and weapons of his slaughtered master, and no one can examine the lineaments of his expressive countenance, without experiencing a gush of feeling arising within his breast, in sympathy with the beautiful mourner.

The gentleness of the Arabian horse is proverbial; and although so elegantly formed, and so delicately fine and sleek his skin, even the English horse would perish under the scanty fare, the toils, and privations he is doomed to suffer. They are patient of hunger and thirst, to a degree unknown in any other race, subsisting, oftentimes, on the withered herbs of the desert, and roots dragged from under the sand, and even on the milk of the camel. They bear continued exposure to the fiercest heats, and day after day pursue marches of incredible toil through the burning sands of the wilderness, forming by their bodies a shade from the fiery heat of the sun, under which their masters repose during the halt for a period in the middle of the day, and a shelter by night. But an Arab never beats, or even speaks harshly to his horse—he treats him as a companion, and his children find in him a playmate, and his wife a nurse for her infant, and all making a pillow of his neck by night. Without the use of the bit, he will obey the slightest motion of his rider; stand at a word, or put himself at full speed in an instant! Such is the creature, so happily formed for the scanty herbs, the thirst, and toil of the burning desert.

Farm Accounts.

Too many of our agricultural journals are filled with the short details of their raising corn and potatoes—as if corn and potatoes were the only incentive to a farmer's life, and his only dependence for profit and comfort. Others seem to hinge on exact statements, reducing to the standard of dollars and cents the items of their labour—hire—manure—board—value of day's work by oxen—interest, &c. &c., as a merchant taking account of stock, book debts, and liabilities, to discern the result of a year's business, as if the cases were parallel. I only wish to guard farmers against a fallacious system which will do very well with merchants who are compelled to balance their books to ascertain their nominal worth and their losses. It is the *modus operandi* I object to; and as proof of its erroneous tendency just take the accounts found in the various journals. A Rhode Island farmer sends a statement of his yearly operations to the county fair to obtain the premium, and gives his estimate of the cost of production; for an acre of corn 47 dollars; wheat, potatoes, turnips, 48 dollars; carrots 52 dollars. Is this so? Does this farmer find, when his crops are harvested, that he has paid out in cash so much to obtain so much? It strikes me that produce could be better *bought*, and cash paid out at once for the same amount of produce, and for better advantage, and his force employed towards improving his farm-yards and gardens, orchards and manure-bed, his swine and poultry-houses; and at the end of the year would he not find himself in a far better condition—find his farm better off by the cultivation of grasses for hay, or ploughing it, to enrich for future crops, instead of toiling over his acres at such a heavy expenditure? The truth is, a farmer makes a great mistake in estimating his own and his family's labour into the accounts. It is his duty and his pleasure, as well as his privilege, to labour if his farm is in good heart: his health was given by a beneficent Creator without charge; and, forsooth, if he and his animals unite to enrich him, he charges his own and their participation in labour by dollars and cents. It is about as consistent as winding up his yearly account—by doctor's bill saved, $30; health accounts, self and family for winter caudling, $50;—which he might do with just as much propriety, and at the same time credit a handsome amount for animals that *didn't* die and implements that *wouldn't* wear out.

Again—why do farmers charge manure to their crops? The soil is entitled to it—it belongs to his cornfield as a matter of right, and he has no right to fix a value on what, though in his possession, is not his. 'Tis true he can sell it readily. So a man may rob himself, if he chooses,—and how very valuable (I mean money value) would it become were every farmer to rob his fields to supply the manure market? Now to raise good crops requires money, there's no question; and a beginner on a farm requires more at first than subsequently. But surely if our Providence friend is right in representing his outlay of capital, it gives a sorry return for money and labour. He had better buy his corn and potatoes, and turn his labour to something else more profitable. A far better way of determining his profits seems to me to set down his outlay for hired help—I mean what he actually pays in money—and credit his crops in the gross at a fair market value. If the balance is in his favour, he should add to it his increase of stock. Then let him ascertain what he would have to pay in his neighbourhood for the board of his family, and add this to the balance. Then to this amount add the increased value of his farm (that is if it had yearly received the benefit of all his manure)—graduated in the scale of interest on his capital united; for instance;—

To farm	$6,000
Interest one year	360
Tools bought this year	36
Amount for wages paid	220
Butcher's meat	30
Shoes, clothing, and shop bills for family	250
Repairs, carpenter's bill and blacksmith's	53
Two cows this year	60
One yoke of oxen	70
Litter of pigs	25
	$7,104

By farm	$6,000
Increased value	360
Produce unsold at fair market value	1,000
Stock on hand, cost	155
Animals born this year, two calves	10
Pork, cheese, and butter unsold	120
Sales in all this year for cash	300
Board, rent or expense of family	400
	$8,345
	7,104
To balance	$1,241

Now I ask, sir, would it not be better to adopt a style of account-keeping similar to that? It cannot deceive, and any farmer can see exactly how far his investment supports—what he can depend on for the future—and what per centage his capital contributes to his family yearly—and then he may find out, where the same sum can be invested to equal advantage if he can. Another reason why I wish to call your attention to this subject, is on account of the amazing ignorance existing among us town's-people respecting these matters. We want to know how a young man on a farm can manage with such labour as he can bestow himself, and by employing labour. What yearly expenditure is a fair

average for a young man of moderate desires, with a small family, supposing his farm paid for, his tools and manure to start on? Let him have a fair portion of wood land, and about fifty acres of tillable land. That would be considered a fair estimate—I mean to include only family expenses, leaving out the education of children and farm expenses. What I want to come at is, how far a good farm will contribute to the support of a small family, and how much of independent income he should possess.

You will perceive by these remarks that I am unable to bow down to hard labour as a man brought up to it can, while I can do much towards it—such as planting, threshing, hay-making, &c., and steady too; and I have thought, since taking your paper, that your experience as a practical farmer was just the thing I needed, before entering on my new vocation. While I do not expect to *make* by it, certainly it would be gratifying to know if by reasonable labour and good management I can at least make it pay its way along; or, if you please, not sink money.—*Farmers' Visiter.*

For the Farmers' Cabinet.

Ploughing by Steam.

Mr. Editor, — It has been supposed by some, that the locomotive will one day be found to run off the track into the field, and lend its gigantic powers to the tillage of the field. Now I do not suppose that there are any real practical men who seriously expect that this will ever take place in reality, and for the best of reasons—not that it cannot be made to perform this and a thousand other wonderful things—but "it wont pay, my dear sir;" the expenses, first in the cost of machinery and fixing, and next, in keeping that in order; then in the cost of fuel and the little time, and the uncertainty of the periods when its services will be required; for just when the steam is up the weather might come on wet, when to plough the land at all, would be destruction to the future crop; and again — when the fire is out, a few hours might intervene—too short in their duration to make it worth while to harness the "fire-horse,"—which would be, in a catching time, of the value of "a king's ransom:" and thus, before the steam could be raised, and the apparatus adjusted, the proper time would have passed, and many things would happen to prevent a man from taking time by the forelock. Then comes the very great quantity of land which could never be ploughed by means of steam, because of the nature of its subsoil, which, if rocky, would play the vengeance with the machinery in an instant, and cause an outlay for repair that would be more than sufficient to plough all the land of the farm ten times over; and such an occurrence could not be guarded against, by reason of the obstructions lying out of sight, and beyond the control of the most careful and skilful individual in existence,—the thing, therefore, appears absolutely impracticable.

But, it is said, we know not what improvements and discoveries might take place between this and then; and indeed that is very true, for the last thirty years have put all our calculations, expectations, and imaginings to a perfect *nonplus*, and not a day but adds something to our wonderings! We read in the book of Job that the life of man is restricted to threescore years and ten, but his life might now be compared to the days of Methuselah, the events of whole years being often crowded into almost as many days, by means of the railroad and locomotive. And truly the accounts which we are receiving from England, respecting the Atmospheric Railroad, which is now absolutely in progress, a branch of the Great Western Railroad being at this time worked by it with the fleetness of the wind, almost induces us to believe that one day or other—as it is foretold—there will no longer be need of fuel in any shape, a sufficient degree of heat being to be obtained from the atmosphere, by simple compression alone, for every purpose!

I have met with a short account of the Atmospheric Railroad in an English newspaper, which I beg to copy for publication in the Cabinet. "The experiment of the line of railroad which runs from Uxbridge road near Shepherd's Bush, across Wormwood scrubs, to the line of the Great Western Railroad, and on which carriages are propelled by means of the atmosphere forcing its way into an exhausted tube or pipe laid down between the rails, on the principle for which Messrs. Clegg & Samuda have obtained patents, has attracted considerable attention. The experiments were a few days ago attended by the government commissioners, who examined every part with the most minute attention, and witnessed the transit of the carriages along the line; several eminent engineers were also present, who expressed themselves perfectly satisfied with the results. The carriages travel at the rate of 30 miles an hour, apparently by magic; and those who are accustomed to see the cumbrous locomotive engines roaring and smoking along the lines of railroads, will be astonished to see a train moving with the rapidity of 30 miles an hour, without any perceptible power to put it in motion; and it is difficult to persuade many persons of the fact, that transition can be impelled by means so simple as those employed." Truly we live in an age of wonders!

J. L. D.

Berks County.

For the Farmers' Cabinet.

The Root Culture.

Mr. Editor,—It has been said by some of the British agriculturists, that the introduction, and recent extension of the root culture in England, will effect as great a change in the prosperity of the landed interest, as the application of steam has produced in the results of mechanical ingenuity.

To assert a proposition, is comparatively easy—to have it sustained by facts, is quite another thing.

I have never been able to persuade myself, that the rich promise held out by the enthusiastic supporters of the beet, the ruta baga, &c., would, in this country at least, ever be realized; though, from what I can gather from others, and from my own limited experience, I believe the facts connected with the production of root crops, to be of a most interesting character to farmers, and should claim their close attention.

Great crops, from 800 to 2000 bushels per acre, are talked of, and written about; and statements of the greatest beneficial results from feeding to milch cows, and other stock, are frequently thrown before the public. We want the greatest possible number of facts in relation to all these things, that we may make our calculations with more confidence, and with less liability to be led astray by the speculations, or isolated results of a few. And I know of no better way to come at this, than for us occasionally to throw into common stock our individual experience, and through the pages of the "Farmers' Cabinet" give the result of the year's crop, and what it has done for our stock.

About the middle of the first summer-month in 1839, I planted an acre of ruta bagas, in ground where a crop of Indian corn had been raised the preceding year. It was well prepared by ploughing, harrowing, manuring, &c. The soil was, as I thought, well adapted to raising the turnip, neither very heavy, nor very light, but one of our good Jersey light loams, with a clay subsoil. The manure — street dirt — was thrown in shallow furrows, three and a half feet apart, and then covered by running another shallow furrow on each side. After being raked down a little, a drill, say an inch deep, was made with a hoe-handle, or some other suitable instrument, directly over the manure, and the seed dropped by hand. They were covered with an iron rake, and a hand-roller passed over them to bring the earth more closely in contact with the seed. They came up well—were thinned so as to leave them eight or nine inches apart—were well formed, and in the fall yielded about 350 bushels. In the ninth month they had become very lousy, and I could not perceive that they grew any for three or four weeks. They took a second growth, however, and when they were pulled some of them were wholly, and not a few partially rotten. I was very apprehensive they would none of them keep; but in this I was agreeably disappointed, as but few were lost that were put in bulk in the cellar; and I fed them to my cows till the middle of the fourth month. I gave about three pecks each per day to two cows, which had calves —the calves were well fatted, and fine. The milk and butter which we used in our family from the other cows, fed in the same way, we could barely eat. There was a bitterness of taste about it that was exceedingly disagreeable. It was with great difficulty the "gude wife" could get the butter by churning, frequently being at it four, six, or eight hours before it came, and two or three times the cream was thrown away, in despair, after churning the greater part of two days.

The cows, besides the turnips, were fed with corn-stalks in the morning, oat-straw at noon, and good hay at night, having a trough of good water continually before them. Now, can the worthy Editor, or any of his friends, tell how it happened that the milk and butter were so worthless? Verily, I thought I paid dear for my acre of turnips. Last summer I raised about an acre each of ruta bagas and sugar beets. The yield was about 300 bushels to the acre. I fed them alternately to my cows—that is, in the morning beets, in the evening turnips. The butter and milk were good, and somewhat increased in quantity;—though there was hardly a fair trial of this, as the cows were all strippers. They were healthy, and looked well, and there was not much difficulty in obtaining the butter. I also fed the turnips together with Indian meal to some cattle that were fatting, and some of the beets to my store hogs, and was satisfied with the results. I am by no means discouraged from planting these roots; but I do think we want more information in relation to them.

When the farmer is disappointed in the amount of his crops, or is chagrined by a failure in the result of feeding them out, and finds that he has not realized what the "books" have promised, he expects the "books" further to enlighten and advise him whether the failure has been owing to his own mismanagement, or to the emptiness of their promise.

Z. Y.

It is not known where he that invented the plough was born, nor where he lived or died; yet he has effected more for the happiness of the world than the whole race of heroes and conquerors, who have *watered* it with tears and *manured* it with blood.

For the Farmers' Cabinet.

On Mildew, Blight, or Rust.

THE CAUSE AND REMEDY.

Read before the Philadelphia Society for Promoting Agriculture, by Col. Kenderton Smith, April 7th, 1841, when, on motion it was Resolved that the same be published in the Farmers' Cabinet.

HEAT and moisture are two of the elements of vegetable life. In the absence of either to a necessary extent, vegetation languishes and dies. I have been led to believe that the farmers of this region have not paid sufficient attention to this subject in the cultivation of their wheat crops; they have acquired the habit of sowing grass-seed with their winter grain, and this, I am led to believe, is the cause of our having obtained, for several years past, but indifferent crops. Their want of success has been owing, in a great measure, to a disease called mildew, blight, or rust, which attacks the crop within a few days only of its maturity; and the cause of it has been a subject of speculation to our most scientific agriculturists and philosophers. Some say it is occasioned by the fogs that prevail at the period of the ripening of the grain; some have attributed it to honey-dew —and a variety of other causes have been assigned, but I have not yet heard any which I consider satisfactory. Many remedies have been suggested—amongst the latest, to sweep the field with ropes when the dew, or moisture, is upon the grain, and to sow the field of standing grain with lime or ashes. I beg leave to offer my views, not only with regard to the *cause*, but to propose a *remedy*.

In the year 1838, I suggested to the Society the expediency of inquiring into the advantage or disadvantage of cultivating grass with winter grain, or of sowing grass-seed upon land previously sown with wheat. I did so, because, as I stated at the time, I had observed that my wheat, in certain parts of my field, where there was no grass, was of excellent quality—whilst in other parts of the same field, mildew prevailed, and the grain was shrunken and worthless. I wanted some one to account for it, and invited the members to inquire, whether wheat grown where there was *no grass* was not generally good; and I then expressed the opinion, that the grass being on the same land with the grain was the cause of mildew, and that the reason of our having defective crops resulted from sowing grass-seed with our winter grain. I was induced to think so, because the wheat of several fields which came under my observation during that season, and which had not been sown with grass-seed, was good, the straw bright, and the grain of excellent quality. I also remarked, that other fields which were sown with grass-seed, and indeed the crop generally, throughout the country, was greatly injured, and, in most instances, utterly destroyed by mildew or rust. What appeared, however, very remarkable was, that we heard of excellent crops which had been raised in the very midst of this ruin and desolation.

In the summer of 1838, I was appointed by the Society one of a committee to examine a reaping-machine, then recently invented. We visited the farm of Mr. John Fox, of Oxford Township, Philadelphia county, for the purpose, where the machine was put in operation upon a field of about eight acres. This grain was remarkably fine in all respects: It was tall, and much of it was lodged, yet the berry was perfectly filled, and the straw was in no respect touched with mildew. *There was no grass sown with this grain*—and I have since learned, that Mr. Fox and his brother have, for many years, always sown their wheat without grass, and that their crops have been uniformly good. Adjoining this field was another in wheat, the straw of which was tall, and the growth of which had been apparently as vigorous, but the grain was shrunk and of little value. This field was sown with timothy the previous fall, and with clover in the spring, and the ground was covered with a thick and healthy coat of these grasses. The soil, situation, and advantages of these lots for the growth of wheat, were, to all appearance, the same. There was another field of wheat on the opposite side of Mr. Fox's field, and only separated from it by a road, which was also utterly worthless from mildew. This lot had also been sown with grass, and there was a strong growth upon it. Here, then, was a field of very superior wheat, situate between two other fields, which were scarcely worth cutting—upon land in as good condition, as favourably situated, and likely to be equally affected by any fog, honey-dew, sudden shower, or abrupt sunshine, cultivated with equal skill, and under like circumstances, and the only imaginable or visible difference that could have been pursued in the cultivation of the crops, was, that the two fields containing the bad grain were sown with grass, whilst the field of good grain contained none. Many farmers from the neighbourhood being present, the committee inquired what was the state of the wheat crops in that vicinity, and were informed that they were generally much injured by mildew or rust. This injury to the grain was indeed generally complained of throughout the state, and I will here remark that the system of sowing clover with wheat, in order to plough it under the following season as a manure, has grown into great favour with our farmers. Upon inquiry I found, however, that grain of an excellent quality was raised by some farm-

ers, although the grain generally was worthless.

Within the last two years I have heard of many instances of good grain, and but of one instance of mildewed wheat having been produced on lands not sown with grass, or on which there was not a strong growth of grass or weeds; in every other case of mildew during that time, I have ascertained, upon inquiry, that grass had been sown with the grain, or prevailed to a considerable extent naturally. May not the presence of grass, therefore, be assigned as the cause of mildew or rust? a disease, I believe, but little known in England, where wheat is mostly drilled—a system well worthy of imitation: there, the farmer goes into his fields with his people in the spring, and carefully removes all grass and weeds from his crop. There, it is not the custom to sow grass with winter grain; and the same system is pursued, I understand, in Ireland, France, and many other parts of Europe. Having lately given the subject much reflection, and obtained more information, I feel convinced that I am right in the opinion I have so often expressed, that the presence of grass in land in which wheat is being grown, is the cause of mildew or rust, and for the following reasons:—

Heat is one of the indispensable elements of vegetable vigour and vitality; without it, wheat cannot ripen. The last effort of a stalk of grain is to elaborate its sap to the berry or kernel, where it secretes and evaporates its fluids, and this process takes place at the hottest period of summer. The leaves of the plant having performed their office of shading the soil, so as to secure sufficient moisture for its vigorous growth, begin now to shrink and dry away, and the scorching influence of a summer's sun, at the season of its greatest power, is brought to act, not only upon the entire stem of the plant, but upon the soil beneath, and hence, in its last expiring effort at the time of its ripening, it evidently requires, and should enjoy the invigorating influence of the genial heat which is designed and provided for it by nature; but of the benefit and virtue of this heat, it is oftentimes deprived at the season of its greatest need, the rays of the sun being impeded by a heavy coat of grass, which covers the surface of the earth, and is usually about a foot or eighteen inches in height. This matted coat of grass, when thoroughly saturated in moist seasons, by impeding the sun's rays, causes an excess of moisture in the soil, and preserves the earth at the root of the grain too cold and wet to maintain a healthy vegetation of the plant at its then near approach to a state of maturity. The temperature of the surface soil is thereby rendered much lower than it would be if exposed to the free action of the sun; an uncongenial temperature prevailing in the soil, and a cold, moist and unwholesome atmosphere surrounding the plant at the root, and perhaps for a foot in height upon the plant, checks and renders languid the circulation of the sap, at the very time when nature indicates that not only the *stalk* but the *soil* itself should be basking in the heat which prevails at that season of the year, and that too at the period when the sun should be exercising a drying influence upon it, when the grain is ready to fill and ripen, and when a healthy and vigorous action of the system by means of heat, is most needed for its maturity. Hence, we find that wheat in shaded situations, under trees, &c., is green when the rest of the crop is ripe, and is always more or less mildewed.

I do not wish to be understood as stating that the presence of grass *always* produces mildew or rust, for I know that good crops of wheat *have* grown with it in dry seasons; but I do contend that the presence of a thick coat of grass or weeds upon the surface of the land predisposes the crop to disease or mildew, and that in wet seasons it is almost invariably noxious and hurtful to the wheat plant; that the uncongenial temperature thereby maintained at the root of the plant, by its being imbedded in too wet and cold a soil, and by its being surrounded to the distance of a foot or more from the ground with a chilled, and, therefore, unwholesome atmosphere during the day, and at night by a temperature equally if not still more injurious, produces a languid circulation, predisposes the plant to become enervated, and finally prostrated; and it then perishes for want of the vigorous and healthful action of the vital function.

The want of this healthful circulation produces the disease called mildew, blight, or rust, which first exhibits itself upon the outer skin of the plant, in spots something resembling in appearance the rust of iron; this soon strikes through the stem, and the sap required to form the farinaceous matter in the grain is impeded, entirely checked, or not secreted. The plant, thus sickened, perishes before its fruit has attained maturity,—hence the grain is not filled, and when dry, it is found to be unripe, shrunk, and almost worthless. Now, under such influences, have we a right to expect any other than such results? Such causes, if rightly considered, are calculated to produce any thing but a healthy influence upon the plant. At the most critical moment of its existence, we shut out from the root the heat which nature has provided to sustain it and promote its maturity, and deprive it of the power to send up or secrete its sap. We prevent it from enjoying the drying influence of the heat it then requires, and

then complain that our favourite plant—that which furnishes us with the staff of life—has been unfaithful, and we lament over the disappointment, disease, and death that we see around us! Is not our system contrary to every rule of reason and common sense? And are we not called upon at once and for ever to abandon it?

It is said, that mildew is more prevalent now than formerly. This seems to go far to establish my doctrine—for in proportion as the land is improved, its capacity for producing vegetation is increased,—and hence, as our land is better cultivated now than formerly, we have a heavier growth of grass or weeds, and thus are we more certain to have mildew. The very improved capacity of the soil is made the means, under our present system, of rendering our wheat crops worse. I have been told that in New England grass-seed is not sown with wheat, and that mildew is not known there. From all I have seen and heard upon this subject, I am led to believe that the wheat crop would be equally as certain in Pennsylvania, if our farmers would refrain from sowing grass-seed with it, and that it is a sure crop here, if the soil is free from weeds and grass. If my theory is true, the productiveness of our land would be, I doubt not, greatly increased by judicious management, since the soil would only have to supply food for one crop instead of two, and that one crop would engage all its power and capacity. This is probably the reason why we sometimes hear of crops that are not only extraordinary in their great yield, but in the superior quality and weight of their grain.

For the reasons I have assigned, I respectfully submit, whether mildew or rust is not *caused* by grass or weeds prevailing at the roots of the wheat crop, whereby the soil is covered and shaded, and thereby, in moist seasons, rendered too damp and cold for the healthful maturity of the plant—and that the *remedy* for the disease is, more care in tillage, whereby the weeds and natural grasses will be destroyed, and to discontinue to sow grass-seed with winter grain.

In this inquiry I have not gone out of my way to consider whether the disease of mildew or rust is caused by animalculæ; whether the retention of excrementitious moisture in plants suspends circulation, or whether the expansion, occasioned by air and increase of temperature, produces congestion; whether the disease is occasioned by honey-dew, or the rays of the sun passing through the globules of water that remain upon the grain after a heavy dew, fog, or shower, and these acting as lenses the straw is *burnt*. These theories have all been fully considered before, and it is not necessary for my purpose that I should discuss them here. Some of them have very lately been suggested by an individual whose opinions are at all times entitled to great respect, and who, it is well known, takes the deepest interest in all that relates to agriculture. It is enough for me to know that the cellular tissue becomes diseased, that the health of the plant is impaired and prostrated, and that the hull of the grain is not supplied with that nourishment which is required to cause it to be filled with farinaceous matter.

Since it has been generally known that I presume to have discovered the cause of mildew in wheat, I have conversed with a number of persons, particularly farmers, who were curious to know my views on the subject, and they have in every instance, except one, admitted that they could not recollect a single crop which, being sown with wheat alone, and being free from grass and weeds, was affected by mildew. A young farmer from Bucks county, from whom I have obtained some of my supplies during the past winter, called upon me as usual a few days ago. In the course of conversation (for I seldom lose a favourable opportunity to have a little friendly chit-chat with a farmer) I mentioned that I thought I had discovered the cause and the remedy for mildew. He expressed some surprise, but when he heard my views, he said at once that he had no doubt it was so, as his father never sows grass with his winter grain, and always has good crops. He then spoke of individual instances of mildewed and good crops in his neighbourhood, and the customary mode of cultivation, and finally said, that he was fully convinced, from his own observation and experience, that my views were correct. I could instance many conversations to the same effect. Some have even gone so far as to suggest that if we were to have no grass with our wheat we might get rid of the Hessian Fly, which also appears peculiar to our region. Wheat, under judicious treatment, does not appear to be a delicate plant, nor one which is much affected by climate. On the contrary, it is cultivated with equal success under the arid sun of Syria and Egypt, and the Southern coast of the Mediterranean, and in the milder temperature of Sicily and Italy. In the more moist climate of England and Ireland, and in the colder regions of Poland, Denmark, the Baltic, and Russia. In those countries it has no disease, perhaps because they take much pains in its cultivation. Of this, however, I don't know much, except as it relates to England, Ireland, and France, where it is deemed necessary before the grain is planted, that the soil should be in most perfect order; and when the grain is growing in the spring, it is well known that the farmer employs himself and his people in carefully removing all grass and weeds from his wheat fields. If our people would take as much pains in *their* cultivation, they would, perhaps, avoid the necessity of so frequently complaining of bad crops; and their business would, in the end, be more profitable. Industry and good management are the parents of prosperity, and no class of men stand more in need of their beneficial influence than the farmer.

The system heretofore pursued by our farmers is wrong in many respects; the stubble of the grain, under the present plan is lost. If ploughed under, the straw, &c., would render the land still more fruitful and productive. Ploughing it after harvest would prevent it from being overrun and impoverished by ragweeds and other noxious vegetation, and sowing it with grass-seed, even without manure after a second ploughing, allowing sufficient time to intervene for the vegetable matter turned under to rot, and the grain which is scattered from the crop at harvesting to grow some two or three inches high—say about 10th of October—would insure a more abundant crop of hay for the ensuing year, and greatly enrich and improve the soil.

In conclusion, allow me to add, that I was induced to turn my attention to this subject by the great interest I have always felt in every thing that relates to agriculture, since I regard it as our greatest source of national wealth and virtue. I felt concerned at the great annual loss sustained by reason of blight or mildew, and was convinced that our want of success in cultivating this crop was occasioned by some oversight or mismanagement, and was not justly to be attributed to an uncongenial or ungrateful soil, or an unfavourable climate. I felt that the man who should discover the *cause* of it, and point out the *remedy*, and thereby save the immense amount of grain that is annually lost to the country, might be justly regarded as having done *the state some service*, and as having conferred a benefit upon the American farmer.

Whether I have satisfactorily accounted for the cause of mildew, and pointed out the remedy, I leave to farmers to determine. At all events, I earnestly recommend to them, instead of fanning their grain fields with ropes, or only sowing the earlier kinds of wheat, which might be difficult to obtain, to give to their land generous coats of lime and manure, or marl; to mix them well through the soil, to sow their winter grain in good season, to thoroughly pulverize and cleanse their land, by careful and judicious ploughing and tillage, before sowing their seed—not *on any account* to sow grass-seed upon land sown with winter grain, and to be prepared with grateful hearts to acknowledge, at harvest, the bounties of a generous soil, and the blessings of a kind Providence. KENDERTON SMITH.

Philadelphia, March 24, 1841.

P. S. I am informed by Mr. Isaac Newton, an active and zealous member of the Society, and one of our most enterprising farmers, that he had, last year, a field of about eight acres of wheat, which he sowed in the fall with timothy and herd grass, except one land, nearly in the middle of the field, which by accident was omitted. The wheat upon this land was not affected by mildew, and the grain was of superior quality, whilst the rest of the field was rendered worthless by reason of mildew.

K. S.

It is only by increasing cattle and sheep that you can increase grain permanently: A small amount of live-stock, and a large amount of grain, would soon reduce the finest land in the world to a *caput mortuum*.

To the Editor of the Farmers' Cabinet.

Rotation of Crops.

Sir,—All the volumes of the Cabinet have just come to hand. I have not had an opportunity to examine more than the last three or four numbers, but I am happy to say I have read them with considerable interest; and having hastily glanced over all the volumes, I consider them an acquisition to my library, and expect to derive much satisfaction and useful information from their pages. Our country ought to be justly proud of such a well-conducted work; I am much pleased with the portraits of distinguished animals given in each number; they do great credit to the artist and the breeder, as well as to the Proprietors of the Cabinet. For introducing them into your truly valuable work you have my thanks; and I have no doubt that the many agricultural journals of the present day will be of more benefit to the farmers of the West, than all the other "Journals" combined.

I commend these lines for the purpose of asking your advice on the subject of *a rotation of crops.* I would first observe that this country is very different from Eastern Pennsylvania; it has only been a few years since the war-whoop of the savage, the hooting of the owl, and the howling of the wolf were the only sounds commonly to be heard; agriculture is in its infancy; our soil is naturally rich, and the settlers have seldom thought of preserving the fertility of their land, much less of improving its quality. My land, for which I ask your advice, has been recently reclaimed from the forest; it is of a rich vegetable mould resting upon a clay subsoil, generally dry and sufficiently porous; the stone in the neighbourhood is a grey limestone; I do not understand analyzing soils, therefore I am not able to give you full information as to its different and constituent parts, as I would wish, but I will give you my proposed plan of management, and hope that you and your very numerous and intelligent readers will give me advice as to its adoption or alteration, and that unreservedly.

I propose, then, to lay off my farm into eight fields of equal dimensions, and to adopt the following rotation of crops, viz:

First year, cultivated roots, potatoes, ruta baga, sugar beets, turnips, cabbages, &c., &c.; second year, corn; third year, oats; fourth year, fall wheat; fifth year, rye; sixth and seventh years, clover, one year to mow, one year to graze; and the eighth year, wheat again; then to break the stubble in the fall preparatory to the commencement of the same course, commencing with roots, &c. Now, would you advise any alteration in the above, inasmuch as it is intended both for a grazing and a mowing system? and would you advise any mixture of grass seeds at the time of laying down—timothy or other varieties? Clover seed is high in price, and difficult to be obtained here in the West; and as I wish to save my own seeds, would you advise mowing for this purpose the first or the second year? And to what crops ought the manure of the farm to be applied, so as to produce the most lasting advantage?

Now, if you would be so good as to procure me information on these several subjects, it would be very thankfully received and highly appreciated, my sole object being to obtain information, and to practise it.

Yours, with esteem,

John M. Johnson.

Hannibal, Missouri, 30th January, 1841.

We beg to call the attention of our numerous readers to the above very interesting letter of inquiry. Here is a fine farm divided into suitable compartments to their hand—will they go to work and cultivate it *upon paper*, and favour the pages of the Cabinet with the results? Assuredly, nothing can be more interesting than such an opportunity; and we hope to be honoured with full particulars, for publication, from many of our practical friends. — Ed.

For the Farmers' Cabinet.

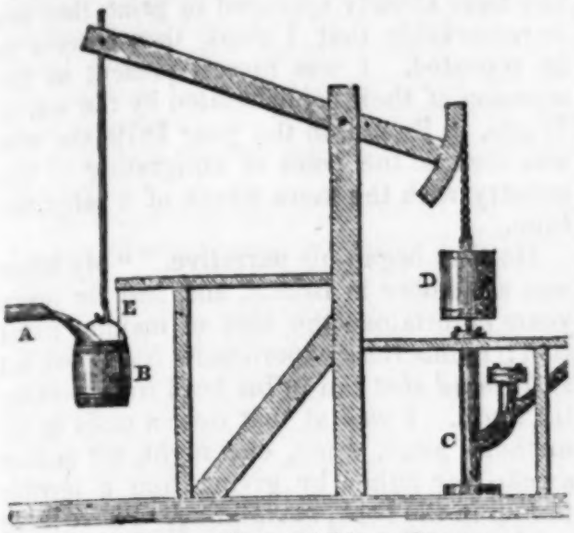
Take off your Potatoe Blossoms.

A little labour well paid for.

It has long been known that crops of any kind, which perfect and ripen their seeds before they are removed, take up and appropriate a vast deal more nutriment (which they derive from the soil), than those crops which are removed before the seeds are perfected. This conclusion looks reasonable at first sight; for the seeds which are the most nutritious part of the plant, can't be formed without much food being forwarded from the earth for that purpose. Hence the exhaustion of the soil by the ripening of the crop; when a crop of grass is cut before the seeds are fully developed, the ground will be found to have parted with a much less portion of its fertility; and this is the reason of a grain crop exhausting the soil so much more than a grass crop.

The following curious and important extract, from a foreign journal, is a practical illustration of the above principle. "M. Zeller, director of the Agricultural Society of Darmstadt, in 1839, planted two plats of ground, of the same size, with potatoes. When the plants had flowered, the blossoms were removed from those in one field, while those in the other were left untouched, to perfect their seed. The former produced 476 pounds, the latter 37 pounds."

C.



Self-Operating Lifting Pump.

It is adapted to many purposes, and to any situation where there is a constant stream of three or four inches, and a fall of five or six feet. The engraving represents it in use for the purpose of raising water.

A is a pipe two inches in diameter, through which the stream is made to flow in such a direction as to fall into the bucket B when the latter is elevated—but as soon as it begins to descend the stream passes over it and flows away, to supply the wooden trough or well, in which is placed the forcing pump C, three inches in diameter. D is a large wooden cylinder, which is filled with stones, weighing about 240 pounds. The bucket is suspended to the long end of the beam, and is so placed that its weight, when nearly filled, shall overbalance the weight of the cylinder D, which will, of course, cause it to descend. At E is fixed a cord, which, when the bucket approaches to within four or five inches of its lowest projection, is extended, and opens a valve in the bottom of the vessel through which the water is discharged, when the weight of the cylinder D again preponderates, and the bucket is brought up to catch the water again. The frame and other parts are too clearly delineated to need explanation, and the whole cost, without the pump, need not exceed fifty dollars, made in the best manner.

There are many purposes to which such a constant acting power could be applied that would pay the cost of erection with interest; it will work while we sleep.

Bakewell Sheep.

The prices at which Bakewell's Bucks were let, appear enormous. In the year 1789 he received twelve hundred guineas for the hire of three, brought at a birth; two thousand guineas for seven—and for his whole letting that year, he received at least four thousand guineas!

To the Editor of the Farmers' Cabinet.

Diseased Jaw in Cattle.

Do you or any of your correspondents know of the cause or remedy for the swelling or lump on the jaw, often found on cattle, proceeding, in the first place, from a mere point just below the eye, and growing very rapidly, so as finally to impede the motion of the jaws! In a large drove of stock-cattle may often be found several with this lump just appearing, and so certainly is it regarded here, in this grazing district, as a fatal indication, that such animals are sold for a mere song. The lump sometimes shows itself on the upper, and sometimes on the lower jaw, and on handling seems fast and hard, like bone. On dissection it is said to resemble a honey-comb. They occasionally break and discharge matter, to the great injury of the animal's condition. I have never known of one being cured, but an opinion exists that the disease proceeds from a carious tooth, and might be cured by its removal. If it is susceptible of a safe operation, it will be a matter of much interest, as many a fine animal has been lost to his owner in consequence. I have a heifer in my yard, from one of my imported cows, with a large lump on the upper jaw, of six months' growth, and now about the size of a quarter of a peck measure, entirely filling the space between the eye and the corner of the mouth. She has recently calved to "His Grace," developing, at first, uncommon milking qualities, but the increasing size of the lump, and the discharge of a large quantity of matter, have induced a rapid decrease of milk as well as of condition. A remedy for these swellings, promulgated through the pages of the Cabinet, would no doubt interest many of your numerous readers.

I must not forget to mention the successful application of the straw-rope, recommended in the number of the Cabinet for October, for hoven, or distension of the rumen. It *may* have been the means of saving the life of "His Grace," whom we found, on going into the stable in the morning, greatly swollen, and panting for breath. Never having seen one stuck, as is generally recommended, I felt much alarmed, and although he was kept constantly moving the swelling and pain increased rapidly, when, recollecting the remedy in the Cabinet, I applied it, and he was relieved almost immediately. The swelling abated, and a large purge of linseed oil afterwards confirmed the cure. Is not such a distension unusual on dry food?

Yours, &c.,

P. M.

Allerton Farm, Chester County.

For the Farmers' Cabinet.

Patent Rights.

Mr. Editor,—I have heard that there are at the present time about thirty newly invented drills, for planting corn, grain, and seeds, awaiting to be patented at Washington. What a pity it is, that when men are seized with the spirit of invention, they would not lay their case before some of their clear-headed neighbours for advice — they might thus be relieved from a deal of expense and suffering and mortification, and the *mountain* would oftentimes be saved the *labour* of going to Washington to be delivered of a *mouse*. It is really curious to witness the frivolous pretensions to invention which persons will sometimes contrive to hang a patent upon: the hope of selling a sufficient number of state or county rights to pay expenses, is the great incentive, and is certainly a safe way of doing business; for in case of infringement, the purchaser and not the patentee has to prosecute. One of the most intelligent men in society, and who has expended more than a million of dollars in the invention and fabrication of machinery in his own business, and who has never patented but one of his inventions, told me he was sometime since requested to call and see a most beautiful model of machinery, which was then in the city on its way to Washington to obtain a patent: he found it some six or eight feet in length, and set in motion by a stream of water falling from a cistern placed above, which was made, in the first place, to operate upon a pair of most elegant brass force-pumps, which set various wheels and drums in motion all along the board, until the whole was brought to bear on a *grindstone*, which, it must be confessed, it did set most tremendously at work! The spectators were astonished at the beautiful complexity of the machinery, and declared it to be the *acme*, with no fear of infringement; but the gentleman, whom I have mentioned, spoiled all, by asking what would be the result, if the whole of the apparatus were to be removed, and the stream of water be made to fall at once on a common water-wheel, by which might be obtained a primary mover, to any extent and power demanded? The inventor packed up his box and returned straight home, without seeing Washington, or incurring further expense.

Now, how very small do many of the inventions of the present day appear, when compared to that of Watts in the manufacture of patent shot—which was founded upon a principle of nature, which can never be infringed. But the *discovery* was due to the wife of Watts, and who, therefore, ought to have the honour; and although the particulars have already appeared in print, they are so remarkable that I think they deserve to be repeated. I was myself present on the occasion of their being related by the son of Watts, in Bristol, in the year 1819, and who was then on the point of emigrating to this country with the mere wreck of a large fortune.

He thus began his narrative. "My father was a plumber in Bristol, and had for many years entertained the idea of making round shot; numberless experiments had failed, but still *round shot* ran in his head from morning till night. I was at that time a child in my mother's arms, when, one night, my mother awoke my father by giving him a terrible thump in the back, exclaiming, 'I have found out how to make round shot.' She said, 'I dreamt that I went into a store to buy the child (meaning myself) a hat, and while there, I heard a curious hissing noise which proceeded from an adjoining room; upon inquiry, I was told they were making round shot, and was invited to see the method; on entering the room, I looked up, and saw men pouring melted lead through a sieve from a great height, which fell into a tub of water at my feet; upon taking some in my hand, I found they were perfectly *round shot*.' My father leaped up in ecstasy, exclaiming, 'that's it, you have indeed found it out,' and instantly setting the melting pot at work, he poured the melted lead from the top of the garret stairs into a tub of water, and found that the shot were much rounder than any that he had before made; he next poured lead from the top of a tower in the city—and lastly, down the shaft of a coal-pit in the neighbourhood, and found that he obtained the shot perfectly round! The thing was complete in itself, neither requiring or admitting of improvement in any way."

I was present at a late lecture by Professor Millington, "on the pressure of the atmosphere," — in which he took occasion to say, the discovery how to make round shot was made by a set of philosophers, who, on perceiving that the pressure of the atmosphere *was equal on all sides*, soon applied the principle to the making of round shot, by permitting it to operate upon a stream of melted lead falling through a sieve from a great height, by which each globule, being pressed upon equally on all sides, at the same instant, by the atmosphere, must of course, and in the nature of things, be compressed into a perfect sphere; and from hence the Lecturer took occasion to remind his audience how much they were indebted to a class of men, who, by means of their superior wisdom and attainments, are thus able to enlighten and benefit society, sometimes at the cost of their own brains! Now, the fact is

the equal pressure of the atmosphere was discovered ages ago, but no philosopher ever dreamt of applying the principle to the purpose referred to, plain and simple as the lecturer considered it; but the discovery was reserved for a woman, and was communicated in a dream!

The result was the total ruin of the whole family: Watts himself, considering that there would be no end to his riches, which came pouring in upon him by hundreds and thousands, gave himself up to the wildest and most ruinous speculations, entrusting his whole concerns to a man who robbed him of every thing he could strip him of; and when called upon for the payment of a large demand, which he could not meet, went and sold his patent right for a song, unknown to a single member of his family! His valuable wife, overcome by adverse circumstances, died of a broken heart, himself soon following to an untimely grave, leaving his family surrounded by difficulties, from whence, as I said, one of his sons was breaking away by emigration, when I met him at Bristol.—"*Sic transit gloria mundi.*"

Your subscriber,

J. B.

To the Editor of the Farmers' Cabinet.

Lightning.

As much damage has been sustained from lightning, and a diversity of opinion prevails as to the best means of guarding against it, I am pleased to find that you are recording in the Cabinet some important facts touching the subject; and I hope you will collect such further data as will bring us to a better understanding of the matter. I will state a case which happened some years ago under my own observation, and also the circumstances therewith connected; the case was communicated to the Society of Natural Sciences of Philadelphia, but I believe it was never published. When I removed to my present dwelling, I found two lightning rods affixed to the house; one placed at each end and about forty-two feet apart, north and south; each rod descending about two feet below the surface of the ground, and ascending perpendicularly to the square of the building, there branching east and west, and terminating about four feet above the tops of the chimneys, and the points sixteen feet asunder. The rods were of common nail iron, linked together, and fastened to the wall with hooks driven in, a poor contrivance, indeed; but I once saw such an one attached to an academy not very far from Philadelphia, with the lower section fallen off.

After a long drought a thunder-gust appeared and rapidly approached from the north-west, and it soon commenced raining, when I moved from the front of the house (east side), where I had been standing, and took my seat in the entry; a sudden flash of lightning, as if a gun had been fired, induced me instantly to spring to the front door, when another similar flash took place; I felt no shock, but the lawn before the house appeared in a blaze, and casting my eyes towards a tree which stood in a north-east direction, I observed some twigs and leaves strewed across the carriage-way, and that the tree had been struck; in about five or ten minutes (time not now exactly recollected) the rain ceased, and I went to examine the tree,—it was split on the south-east side, from a fork in the upper part, down to a hook (about five feet above the ground) with a chain two feet and a half long hanging to it; the lightning then passed along the chain to its lower end, where it entered the tree again and split it from thence to the ground; on feeling the chain I found it so heated that I could scarcely hold it. After examining this tree I observed that another of the same species (Athenian poplar), which stood in a south-east direction from the house, with a similar chain, was struck precisely in the same manner. These trees stood exactly the same distance from a rod, and each thirty-eight feet from the nearest point; they were both higher than the rods.

Immediately after the above occurrence, I had the old rods taken down and new ones put up; the latter of five-eighths round iron above ground, and one inch thick below; they go into the ground about five feet, at an angle of forty-five degrees from the house, surrounded by charcoal, and pass about eight feet above the comb, with platina points.

When I was going to put up rods about my out-buildings, which are extensive, I consulted some of my scientific friends; they freely gave their opinions, but I could gain very little information founded on matter of fact.

JAMES WORTH.

Sharon, Bucks County, March 22d, 1841.

Expeditious Threshing.

MR. EVERLY, of Northiews, made a bet of £5, with Mr. R. Leach, of Blackforrington, that he would, within the short space of one hour, in his threshing machine, thresh one hundred bushels of oats and bind the straw into bundles: the performance was witnessed by almost all the farmers in the neighbourhood, and, extraordinary to relate, within forty-seven minutes, Mr. Everly threshed 133½ bushels and bound the straw into 240 bundles—a fact unparalleled in the annals of agricultural labour.—*Exeter Post.*

To the Editor of the Farmers' Cabinet.

Poudrette.

Dear Sir,—I observe in your number for February, the communication from Mr. *Jacob Smith*, of Bucks county, in relation to "Poudrette." Presuming that his object is *information*, I take the liberty to send you a small pamphlet, containing several letters and statements in relation to its use, *comparatively* with other manures, made by *practical farmers* of character, intelligence, and standing in the community, and which require no testimony of mine to sustain their accuracy where the gentlemen who made them are known. Those statements were made by them after they had used the article *one*, *two*, or *three* seasons, *at my special* solicitation, to enable me to give to give to *others* who sought information, the best which the circumstances of the case, on account of the recent introduction of the article into use in this country, would admit of—and therefore it is that I feel called upon to give you these facts, and to request you to give the statement a place in your journal, that those who have read the remarks of your correspondent may also understand the position of those whose testimony he deems not "*dis*-interested," simply because their names appear in "the list of stockholders of the company."

It is true, sir, that the gentlemen who wrote the letters and made the statements in the pamphlet sent herewith, are stockholders, and they became so to the extent of one share each in 1837, when I undertook the enterprise, at my urgent solicitation, to enable me to make the experiment—and they, each of them, and a few others, who give equally favourable accounts of the effects of poudrette, used from fifty to one hundred bushels in the summer of 1838, with a success which induced them to increase their number of shares for their own use, thus giving the very best evidence of their estimate of its value, and the economy and convenience of using it. You will perceive by a reference to the statement of W. W. Mills, Esq., dated March 27, 1840, that he gives an *opinion* in relation to its relative value for *spring* and *fall* use;—and in another communication made by him, dated 9th August, same year, he gives the result of his experience for fall use on wheat; thus showing that his *experience* contradicted his *opinion*—or rather, that it proved superior for fall use on wheat, to the very best manure known before in this country. And if you will refer to the statement of Mr. Brewster H. Wood, of Huntington, L. I., you will find that he speaks favourably as to its durability in its effects on grass after wheat, and on oats after corn.

As to its durability, I do not pretend to say much at present, not, however, from a want of confidence, but from want of practical knowledge in this country. I have not allowed myself to give opinions and theories in relation to its comparative value, nor to make assertions of its effects until I have obtained from practical farmers the results of their careful experiments—I say *careful*, because they have been made with a single eye to their own interest—with a view of determining whether they should take additional shares, or dispose of what they had—and the result has been, in almost every instance, an increased subscription to the stock of the company—not with a view of "stock-jobbing," but for the purpose of economy in the improvement of their farms and gardens.

As the gentlemen alluded to by your correspondent were induced by me to take an interest in the enterprise, and then to communicate the result of their experience for publication and the benefit of others, I deemed it my duty to make this reply to what has the appearance, at least, of attributing their statements to *interested* motives, instead of to that liberal feeling which I hope to see more general amongst men—a desire to communicate, for the benefit of others, information which has proved useful to ourselves. And I will add, that if there is any one person, more than another, who has an interest in the success of this enterprise, it is the *practical farmer* who finds it expedient to *purchase* and *haul manure*.

Respectfully,
D. K. Minor,
Agent N. Y. P. Co.

New York, March 17, 1841.

To the Editor of the Farmers' Cabinet.

Blight, an effect.

Sir, — In Agricola's excellent paper on mildew, in your last number, there is an observation which goes far to corroborate the truth of the position, that animalculæ are the *effect* and not the *cause* of blight. It is there said, "nature is ever economical, and whenever animal or vegetable substances are in the *progress of decay*, mouths are found ever ready to convert dead matter into food for living things, so as to perpetuate the largest possible amount of animated existence. On the death of the plant, the tender, succulent fibres of the roots immediately decay, and in drawing them from the ground the appearance of them has led many to suppose that they had thus discovered the true *cause* of the disease of the plant, when, in fact, it was only the *effect* of its previous dissolution."

Now this theory appears so self-evident and satisfactory, that I must be allowed to wonder that all are not struck with the power of its truth—as is said of the pure principles of Christianity, it is so plain that he that runs

may read, and a wayfaring man cannot err! And is it not also self-evident, that if these animalculæ were created to prey on *healthy* plants and animals, they would be destructive of the laws of nature, instead of working in unison towards the grand fulfilment of the whole design—exercising demoniacal power in the *material*, as the evil one is supposed to be doing in the *moral* world, on a principle adverse to the Creator, whose law is, "increase and multiply and replenish."

With this view of the subject, I can fully understand and appreciate the consummate wisdom which has so beautifully ordained the system with which we are surrounded, for I see that the moment the decay of the least animal or vegetable matter takes place, and when it would be no longer either useful or ornamental, immediately "mouths are found ready to convert the putrid mass"—which would else remain to exhale into the atmosphere, unfitting it for healthful respiration—"into food for living things;" each performing the office of the Turkey-Buzzard amongst animals, and clearing away what is become offensive and deleterious. And more than this, it would be perfectly *unnatural* and therefore *impossible*, in the wise economy, for the lives of these animalculæ to be supported by the juices of any but diseased plants and animals; hence it is, that we see, as has elsewhere been observed, that after a plant has become covered with living animalculæ, in consequence of the stagnation and putricity of its juices, a fine sunny day or two, or even a single genial shower of rain, will have the effect of bringing back a natural state of circulation, when immediately, and as if by magic, the whole brood of living things will be swept away—their presence being no longer necessary—without the least intervention of human power, no one knowing which way they go or what becomes of them! I repeat, therefore, that the theory advocated by Agricola appears to me so simple, self-evident, and satisfactory, that I must be permitted to wonder that all are not struck with the power of its truth. J. Delorade.

Luzerne County.

"I always listen to the remarks of country people on the habits of animals; one of these being shown Gainsborough's celebrated painting of pigs feeding, 'To be sure,' said he, 'they be deadly like pigs, but nobody never seed three pigs feeding together, but one one 'em had a foot in the trough.'"

In Persia, where the pigeon is not eaten, they are kept merely for the sake of their dung, which is used exclusively for raising watermelons; some nobles keep as many as 10,000 for this purpose only.

For the Farmers' Cabinet.

More about the Anti-Septic effects of Lime.

Mr. Editor,—In the last number of the Cabinet, over the signature of Arator, is an essay headed "Lime a Septic," from which I understand the writer to allege that lime promotes and hastens the putrefactive fermentation, or decomposition, of animal and vegetable substances, or, in agricultural language, that it promotes the decay or rotting of those substances, and hastens their conversion into mould. The example adduced to prove this position is as follows, viz:

"I set to work to operate upon a pile of chips at my door, which, in the course of years, had accumulated to a very inconvenient bulk. These were thrown up in the form of a stack, with an admixture of quick-lime; in the course of two weeks a violent fermentation had commenced throughout the mass, by which it was reduced in six months to less than one-third of its original dimensions, having the appearance of fine vegetable mould, and proving a most efficacious top-dressing to a piece of unproductive meadow. Its (that is lime) agency in promoting the decomposition of that mass of straw and stable litter, with which our barn-yards are encumbered in the spring, is well known to our farmers, and is often used for that purpose."

A Montgomery county farmer, who is familiar with the application of lime on a large scale, and observant of its effects, and one of your constant readers, in speaking of the above, gave it as his opinion, that they were *made facts* to support a theory that practical farmers had long since rejected as untenable. He says, by the occasional application of quick-lime to chips as it is washed off by rains, (say once a year,) they may be preserved, for an indefinite period, as sound as when it was first applied to them. It being premised that the quantity of lime is not such as to promote combustion, or the "*destructive decomposition*," as it is sometimes called. As regards "straw and stable litter," and he might have added cornstalks, every farmer who has applied *lime* to these substances, (so as not to burn them to ashes,) knows that they are preserved from decay in a remarkable manner by it, and are found for months after of a beautiful yellow colour.

As experimenters sometimes disagree in regard to results, I propose to Arator to begin anew, by taking two cart-loads of fresh chips, one of which shall be deposited in "a stack," without any intermixture whatever, exposed to the influence of the elements; the other shall be similarly disposed near the first, every circumstance corresponding exactly, excepting that the latter shall be mixed, and well covered, and kept covered, with "quick" or

caustic lime, (so as not to burn them to ashes,) when, if the chips mixed and covered with lime rot, and are converted into "mould," *sooner* than those that have no lime applied to them, you may forward a copy of the Farmers' Cabinet to every respectable farmer in "*Kishacoquillis Valley*," including Arator, and send the bill to Agricola, and he will pay it.

Sir H. Davy's name is introduced by Arator to strengthen his position; and there is no doubt that when he gives the result of his own experiments, great reliance can be reposed in them. But is this the case in the present instance? I have the last London edition of his Lectures on Agriculture, published by his brother John Davy, who is one of the greatest chemists of the age, now before me. Sir H. was not a practical farmer, and it don't appear that he had experimented on this subject; but his brother states in a note, page 297, that "The manner in which lime acts in agriculture requires further and minute investigation, and is a most important subject for inquiry. *From the experiments I have made, I have satisfied myself that it arrests equally vinous and putrid fermentation.*"

Hayward, who was a practical farmer and a man of science, published a most valuable work on agriculture in 1825, and in his review of Sir H.'s observations on lime, page 196, says—"It (that is lime) prevents the fermentation, and I have always found this to be its peculiar property. Cruikshank made many experiments on fermentation, and invariably found, whenever he added a fourth substance to the three which compose saccharine matter, no fermentation took place; *he tried lime*, and, at another time, a small quantity of *potash*, and the addition of either *prevented* fermentation. He (Sir H.) speaks of lime as a *septic*, and of its assisting and hastening putrefaction; but, as before shown, lime possesses a directly opposite quality; it not only prevents, but arrests putrefaction, and is therefore, in fact, *anti-septic*;" page 198, Hayward.

Agricola started in life with the same opinions of lime as Arator, but in undertaking to convert dead animals and vegetable matter into mould by the use of lime, on the plan of the "chip" experiment, he was completely defeated, for instead of rotting, as was expected, they were preserved from putrefaction much longer than similar matter without lime.

In Vol. III., Farmers' Cabinet, pages 20, 27, 77, 152, and 250, and in some other parts of the same work, essays may be found detailing experiments, &c., by different writers on this subject, which can scarcely fail to interest. If Arator will call on the editor of the Cabinet, he will direct him to a place not far distant, where he can see common boards which have been exposed to every change of the elements for thirty-four years, and are now as sound as at first; and the only protection they have had from putrefaction has been the application of a little "quick-lime" annually. It is believed these boards have been thus exposed for twenty years longer than above stated, but positive testimony only extends back for thirty-four years.

Main, in his work on poultry, London, 1839, page 320, has a chapter on preserving eggs, in which it is stated, that "three eggs, very sweet, were found in the wall of a church at Milan, after a residence there of three hundred years." Capt. —— R., of Philadelphia, a respectable gentleman, who has often been to China, says that he has taken eggs, immersed in milk of lime, to Canton and back to Philadelphia without decay. In this case, if lime was so prone to cause putrefaction, it might have been supposed they would have been rotten before they were outside of the Capes.

Every old woman who ever wielded a white-wash brush, knows the preserving tendency of lime; and where is the person to be found, who does not know, that when it is put into privies, or foul sinks, or applied to putrescent matter of any kind, that it suspends the evolution of those gases which are always disengaged during the process of putrefactive decomposition. Agricola.

P. S. Please start the experiment with "chips" and lime as soon as possible, as I am anxious to know the result.

To the Editor of the Farmers' Cabinet.

Orcharding.

Mr. Editor,—Having until lately led a city life, and now being thrown by circumstances (not, however, against my inclination) into the country, I am obliged to commence seeking information anew. I observe that your columns are open to inquiries, and avail myself of their medium, the more willingly, as I hope, in endeavouring to profit myself, I may elicit information which your readers generally will find interesting. In return, I will promise to keep a strict record of matters and things as they transpire, and send you particulars, should any facts meet my observation which I think would be generally interesting.

The farm on which I am, has a great number of fruit trees—apples, pears, cherries, &c.—which are of the best kinds, and formerly yielded an abundance of the finest fruits—but, from many years' neglect, the fruit is now, in most instances, almost worthless. At first view, I thought I should be

obliged to depend upon a new generation, the trees being old and the trunks generally decayed, more or less, and covered with canker. But having accidentally met with "A Treatise on the Culture and Management of Fruit Trees, by Wm. Forsyth." I found such astonishing results from the process recommended, of renovating old decayed trees, and these, too, so plausibly detailed, and apparently so well authenticated, that I looked upon it as a treasure, and studied it with fervency, determining to give a fair trial to the process as soon as the season would permit me to commence operations. I have since been continuing to gather all the information I could find on the same subject, and have received many (which appear to me) valuable hints from your Cabinet, of which I (as every one interested in agricultural pursuits should) have a complete series from its commencement.

At page 295 of the first volume, I observed an article "On Pruning Orchards," from "Coxe on Fruit Trees," in which it is said, "It was a common practice some years since to apply Mr. Forsyth's celebrated composition to large wounds produced by pruning: that novelty, like many others, had its day among us; and finally lost its popularity from a general belief in its insufficiency. Mr. Forsyth, at a later period, announced a *new* discovery, which had been long known in this part of our country, that cow-dung and urine was more efficacious in healing the wounds of trees than his plaster, even in the moist climate of England. In America our winter frosts decompose it, and our summer heats dry it up so completely, as to render it useless for the purposes intended."

Now I am loth to give up my old trees, which I know to be of the very best kinds—and therefore am still anxious to follow Forsyth's directions, in hopes of the results promised—but should wish very much to have the experience of some who *have tried* the method recommended—and it is with the hope that this will meet the eye of some one who is able to give me information on this subject, that I apply to you.

The above article from Coxe, would have more weight with me, had I not tried the composition late last fall on some beautiful young maples, which stand in front of our house, and had been very much injured by the woodpeckers or sap-suckers, which had cut the bark around them, so that they were almost girdled;—hoping to save them, I put on the composition, under very unfavourable circumstances, as the day was wet when I applied it, and heavy frosts set in very soon after—so that I did not think it would stand, but, to my surprise, it did, and has, all winter, afforded a perfect protection to the injured bark. Thus, from experiment, I am inclined to believe, that our winter frosts do *not decompose* it.

Further—it is said, that at a later period, Mr. Forsyth announced a "*new discovery*"—whereas I find that his after discovery, as Coxe calls it, is only a recommendation to use his composition in a liquid state, made so by the addition of urine and soap-suds, as the best way of applying it, and with the least trouble—it being also, used in this way, more likely to adhere closely to the wood.

From the remarks quoted from Coxe, one would suppose that the novelty (Forsyth's composition) had been afterwards superseded by himself by a new "discovery," which would be calculated, if true, to weaken our confidence in him,—whereas the latter was nothing more than an improved method, in making use of the *same composition.*

The very favourable results promised by Forsyth, make me anxious to know more about him. Should any of your readers have tried his system of management, I would be thankful to hear from them what success it met with,—and if it failed, why it was supposed to do so. V.

We would direct the attention of our correspondent to the article on Pruning Fruit Trees, at page 117 of our present volume. By judicious pruning, careful cleansing, and a liberal use of the medicated or Kyanized Tar, together with a pretty general system of ingrafting anew the healthy branches, we have no doubt he may recover, in a very great degree, the health and vigour of his plantation. We would hesitate long before we would remove a single tree, until we had ascertained, by experiment, that there was no hope of resuscitation. To dig about, and manure them with an addition of fresh mould to their roots, and a copious admixture of lime, would be, we conceive, an almost certain mode of causing them to throw out new wood; and in the hands of our correspondent, we should consider *that* to be about the only thing needful.—Ed.

The late James Ronaldson, Esquire.

It is with much concern we notice the death of this useful and indefatigable man; he expired at his house, in Philadelphia, on the 29th of March, in the 73d year of his age. His last bequest to the Agriculturists and Horticulturists of his adopted country, was a variety of the choicest seeds, roots, and implements for the field and the garden, which he had selected with the greatest care while in Europe the last summer, and at which time he visited his native country *for the last time.* Many of these seeds he has distributed gratis, with an unsparing hand; the Implements are deposited at the Franklin Institute, of which he was the President, for inspection as models, and from one of these, the Deanstone Subsoil Plough, we hope to obtain a drawing for our next number of the Cabinet. By the practical agriculturist and horticulturist, as well as by the benevolent societies around, the name of James Ronaldson will long be held in grateful remembrance.

Notice.

At a meeting of the Philadelphia Society for promoting Agriculture, held at the Philosophical Hall, on the 7th of April, 1841, James Gowen, Isaac W. Roberts, and James Pedder, Committee—to whom had been referred the subject of designating the crops for the Society's premiums for the present season—reported the following:—

For the best crop of Potatoes, quantity and quality considered, not less than 3 acres, $15.

For the best crop of Corn, not less than 5 acres, $15.

For the best crop of Wheat, not less than 5 acres, $15.

For the best crop of Ruta Baga Turnip, not less than 1 acre, $10.

For the best crop of Field Carrot, not less than ¼ acre, $10.

For the best crop of Parsnep, not less than ¼ acre, $10.

Erratum.

We are much gratified to find that many of our friends have remarked a typographical error in the account of the *Kintore Ox* in our last number; it is there stated, he was calved in April, 1837—it should be 1827, and with this error we cheerfully debit ourself, for by it our friends have given proof that they read us with a view to understand. But will they *credit* us with the assurance that we had detected the error before they had the opportunity of pointing it out, not, however, until a considerable portion of our edition had been worked off. It is our earnest endeavour to be *correct*—how nearly we generally approach to that standard, we should likewise be happy to learn.

In the measurement of the "Pennsylvania," "depth from brisket to withers 5 feet 6 inches," is no mistake. The measurement commenced from the centre of the brisket, following the fulness of the shoulder over to the centre of the withers; which fulness of the shoulder gives a length equal, within one inch, to the whole height of the animal.

To Correspondents.

The last number of Low's "Illustrations," contains four portraits of horses; they are matchless in their proportions, and are done in the most magnificent style. It is our intention to engrave the whole for publication in our pages. The Arabian Horse, in our present number, being the first,—then come the thorough-bred horse "Vestris," the "Old Irish Hunter," and the "Connemara Horse," from the county of Galway, a beautiful Pony, 13½ hands only in height, but with the strength of the cart-horse.

We acknowledge the receipt of E. W. Bingham's favour, with its enclosure. With regard to the education of the dog for farming purposes, we do not conceive it would be possible to give any very specific directions. To tie a sheep-killing dog to an old ram, has often been said to be a most *sovereign* remedy—but we have never known a real shepherd's dog turn sheep-killer; it is the lazy, unemployed dog, like the lazy, unemployed man, who gets into mischief for want of something better to do. The farmer's dog should accompany him in the fields, and he will soon become as careful of the out-door stock as he is of the family in the house. In ninety-nine cases out of every hundred, sheep are killed by strange dogs, to whom no mercy should be shown.

To our friend, A. Miller, we would say, the seed of the yellow sugar beet for cattle, may be obtained at the seed stores at Baltimore, which is pretty much in his neighbourhood, either at Sinclair's, in Light street, or at Denny's, Ellicot street.

A model of Weeks's patent Vermont Bee-hive has been deposited at the office of the Cabinet for inspection. It is simple, and is said to be well adapted to the purpose specified. Individual and county rights may be obtained by application as above.

"J. L." is informed that Lambs, a cross between a thorough-bred Leicester, or Bakewell Buck, and a very superior lot of Southdown Ewes, may be obtained, if applied for immediately, of Mr. Paschall Morris, Allerton Farm, near West Chester, to be delivered in August or September next. He has also for sale several thorough-bred yearling Bakewell Bucks, from Ewes of his own importation, of most superior quality.

A most splendid quarterly Journal, entitled "The Orchardist's Companion," is about to be published by Mr. Hoffy, 41 Chestnut street, Philadelphia. Its pages are to be embellished with drawings of coloured fruit, by the hand of the Proprietor and Publisher, in a style of elegance equal to any thing that has been done in any country—particulars in our next.

The quantity of rain and melted snow which fell during the 3d month, (March,) 1841, was ..... 5.821 inches.

John Conrad.

Pennsylvania Hospital, 4th mo. 1, 1841.

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